

A Comprehensive Outpatient Pediatric Resident Complex Care Curriculum

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Abstract

Introduction: Pediatric resident training typically prepares learners to care for children with medical complexity (CMC) when acutely ill; however, residents often do not receive formal primary care training for this population. We designed a curriculum to improve pediatric resident knowledge, skills, and behavior when providing a medical home for CMC. **Methods:** Guided by Kolb's experiential cycle, we designed and offered a complex care curriculum as a block elective to pediatric residents and pediatric hospital medicine fellows. Participating trainees completed a prerotation assessment to establish baseline skills and self-reported behaviors (SRB) and four pretests to document baseline knowledge and skills. Residents viewed online didactic lectures weekly. During four half-day patient care sessions per week, faculty reviewed documented assessments and plans. Additionally, trainees attended community-based site visits to appreciate the socioenvironmental perspective of CMC families. Trainees completed posttests and a postrotation assessment of skills and SRB. **Results:** Between July 2016 and June 2021, 47 trainees participated in the rotation, with data available for 35 trainees. Residents demonstrated significant improvement in knowledge ($p < .001$), self-assessed skills (average Likert-scale rating prerotation = 2.5 vs. postrotation = 4.2), and SRB (average Likert-scale rating prerotation = 2.3 vs. postrotation = 2.8) based on test scores and trainees' postrotation self-assessments. Learner evaluations of the rotation site visits (15 out of 35, 43%) and video lectures (eight out of 17, 47%) demonstrated overwhelmingly positive reaction. **Discussion:** This comprehensive outpatient complex care curriculum addressing seven of 11 nationally recommended topics demonstrated improvement in trainees' knowledge, skills, and behaviors.

Keywords

Complex Care, Medical Home, Pediatrics, Primary Care

Educational Objectives

By the end of this 4-week rotation, learners will be able to:

1. Identify children with medical complexity (CMC) and special health care needs.
2. Demonstrate improved competence in providing acute, follow-up, and preventive care services to CMC with an emphasis on the medical home setting (accessible, family-centered, continuous, comprehensive, coordinated, compassionate, culturally effective).
3. Formulate care plans that take into consideration shared decision-making and the many socioenvironmental factors that motivate families' decision-making.
4. Locate and describe community-based health care providers and nonmedical resources to optimize medical,

developmental, socioemotional, and behavioral health care of CMC.

Introduction

The Maternal Child Health Bureau defines children with special health care needs as "those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally,"¹ a broad definition comprising 13%-18% of children nationally.² Children with medical complexity (CMC), however, are an important subset of this population who have complex chronic health care needs and are considered to be medically fragile.³ Examples include, but are not limited to, prematurity-related, genetic, congenital or acquired neurologic, and cancer/cancer survivorship diagnoses that result in functional limitation. These disorders create a need for extensive care coordination, collaboration with community-based services, and provision of high-quality care within the home to optimize health outcomes, limit unnecessary emergency department visits, prevent hospitalizations, and maximize quality of life. Such care requires

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awareness of the numerous factors that play a role in the health of CMC.

The numerous layers, or systems, that surround a child, ranging across family, school, neighborhood, and childcare environments, as well as environmental culture and policies, have a combined impact on the child's developmental trajectory.⁴ Pediatric resident training often prepares early career physicians to care for CMC when acutely ill; however, residents typically do not receive the formal, intense training necessary to identify and address relevant socioenvironmental factors that impact child health.^{5,6} Additionally, evidence suggests that resident curriculum structure lacks emphasis on continuity and prioritizes urgent issues over chronic, longitudinal care. A recently published needs assessment for a pediatric resident medical home curriculum found that although 75% of faculty respondents indicated interest in incorporating medical home concepts, only half reported being knowledgeable in these concepts and a mere one in 10 reported access to readily available resources.⁷

A 2018 national Delphi study identified 11 curricular priorities in the care of CMC (i.e., advocacy for patients/families, aspiration, difficult discussions, dysmotility, feeding difficulties and nutritional concerns, feeding tube management/troubleshooting, neuromuscular and skeletal issues, pain and irritability, safety and emergency planning, team management/care coordination, and transition).⁸ Through an iterative process, a panel of national experts in complex care developed and published 11 entrustable professional activities (EPAs) that map to all 21 pediatric competencies.⁹ Brief sessions introducing the concept of the medical home for CMC and their various needs,¹⁰ the approach to physical examination of CMC,¹¹ and a variety of single-topic complex care modules¹²⁻¹⁷ are available to pediatric clinician educators. One curricular resource published in *MedEdPORTAL* in 2012 demonstrates the importance of a medical home, arranges site visits, and broadly allows for self-directed learning of chronic conditions for interns.¹⁸ However, during this rotation, clinical experiences in the medical home setting are primarily limited to the interns' continuity clinic. We found no educational resource that comprehensively integrates the numerous aspects of the provision of preventive, follow-up, and acute care of CMC in a medical home setting while specifically incorporating didactic teaching of complex care curricular priorities and EPAs, as well as partnerships with community-based resources, in the literature.

With that gap in mind, we aimed to design a comprehensive pediatric resident complex care curriculum that would incorporate didactic, clinical, and experiential teaching methods addressing seven of the 11 relevant EPAs.

Methods

Setting

The Baylor College of Medicine–The Children's Hospital of San Antonio (BCM-CHofSA) Complex Care Clinic serves approximately 200 children and youth with medical complexity. Eligibility criteria include dependence upon at least one medical/technological device and the need for care under at least two pediatric subspecialists. Of those with complex, chronic diagnoses, 65% receive private duty nursing services, 75% have a feeding tube (nasogastric, gastrostomy, or gastrojejunostomy), 20% have a tracheostomy tube, and 26% are dependent upon invasive or noninvasive mechanical ventilation.

Rotation Participants

The BCM-CHofSA Complex Care Clinic delivered a comprehensive, 4-week, elective rotation, offered initially (July 2016-present) to PGY 2-PGY 4 pediatric trainees (inclusive of pediatric hospital medicine fellows) and later expanded to include PGY 1 pediatric trainees (July 2019-present). The rotation allowed for a maximum of two learners per 4-week block.

Curriculum Design and Implementation

The curriculum was designed and implemented utilizing an adaptation of Kolb's experiential learning theory (reflecting→thinking→doing→experiencing) as a conceptual framework.¹⁹ Pretests and a presurvey allowed learners to reflect upon their own personal meaning and motivation, or gaps in knowledge and skills, before engaging in didactic video lectures that facilitated acquisition of new concepts. As learners reflected on and thought through clinical encounters, site visits with multidisciplinary colleagues and community-based providers emphasized practical application that improved learner comfort in doing. Delivery of timely formative feedback following clinical encounters and completion of posttests promoted synthesis and extension of knowledge and skills and an immersive experience of caring for CMC.

The topics we covered included care coordination, sharing unexpected news, nonoral feeding and feeding tubes, evaluation and management of aspiration, adverse childhood experiences and social determinants of health, diversity sensitivity, education policy, health care financing policy (Medicare, Medicaid, Supplemental Security Income, Title V, and Medicaid waivers), and health care transition. Topics presented in this publication are limited to care coordination, sharing unexpected news, nonoral feeding and feeding tubes, and evaluation and management of aspiration, with the remaining topics either previously presented in the literature²⁰ or in consideration for future publication.

Prerotation preparation: We created a facilitator guide (Appendix A) to assist educators with prerotation preparation. One week prior to beginning the rotation, learners received an orientation email (Appendix B) that described rotation expectations and included the rotation syllabus and checklist (Appendix C), pre- and posttests (Appendix D), pre- and postrotation surveys (Appendix E), and didactic lectures (Appendices F-I). Learners were instructed to complete the prerotation survey (a baseline self-assessment of their skills and behavior in the care of CMC) and all pretests (assessments of

their baseline knowledge of care coordination, engaging in initial challenging conversations with families of CMC, nonoral feeding, and aspiration).

Rotation components: Each didactic topic was delivered via clinical, didactic, and experiential methods (Figure 1). The facilitator guide (Appendix A) included suggestions to pair didactic and experiential learning.

- Clinical: Trainees led approximately 12-15 patient encounters per week throughout the 4-week block rotation.

COMPLEX CARE CURRICULUM ELEMENTS					
<u>Didactic Animated Video Lectures</u>	<p style="text-align: right;"><u>Week 1</u></p> Care Coordination Sharing Unexpected News				
	<p style="text-align: right;"><u>Week 2</u></p> Nonoral Feeding and Feeding Tubes Evaluation and Management of Aspiration				
	<p style="text-align: right;"><u>Week 3</u></p> Adverse Childhood Experiences and Today's Social Determinants of Health Diversity Sensitivity Education Policy Titles XVIII, XIX, and V, Supplemental Security Income, and Medicaid Waivers				
	<p style="text-align: right;"><u>Week 4</u></p> Health Care Transition				
<u>Clinical Care</u>	~12-15 well child, follow-up, or acute visits for children with medical complexity per week Encounter notes reviewed for elements of HEADS AT training tool for residents				
<u>Experiential</u>	<table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: center;">On-Campus Site Visits</th> <th style="text-align: center;">Off-Campus Site Visits</th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> • Bronchopulmonary dysplasia clinic • Craniofacial anomalies clinic • Tracheostomy/ventilator with respiratory therapist • Ventriculoperitoneal shunt with pediatric neurosurgery physician's assistant • Dialysis rounds with pediatric nephrologist • Wound care session with wound care nurse </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> • Private duty nursing home visit • Kinetic Kids • Team Ability • Down Syndrome Society of South Texas • Texas Parent to Parent • The Arc </td> </tr> </tbody> </table>	On-Campus Site Visits	Off-Campus Site Visits	<ul style="list-style-type: none"> • Bronchopulmonary dysplasia clinic • Craniofacial anomalies clinic • Tracheostomy/ventilator with respiratory therapist • Ventriculoperitoneal shunt with pediatric neurosurgery physician's assistant • Dialysis rounds with pediatric nephrologist • Wound care session with wound care nurse 	<ul style="list-style-type: none"> • Private duty nursing home visit • Kinetic Kids • Team Ability • Down Syndrome Society of South Texas • Texas Parent to Parent • The Arc
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<u>Learner Assessment</u>	Pretests and posttests				
	Pretotation and postrotation surveys				
	Postrotation inpatient attending physician survey				
<u>Evaluation</u>	Postrotation evaluation				

Figure 1. Complex care curriculum elements. Didactic animated video lectures: Week 3 and 4 topics are not presented or evaluated in this publication and either have been previously published or will be submitted separately in the future due to large file-size concerns. Off-campus site visits: Kinetic Kids is a nonprofit organization that provides physical and creative activities for children with medical complexity. Team Ability is an outpatient pediatric rehabilitation therapy center. Down Syndrome Society of South Texas is a genetic diagnosis support group. Texas Parent to Parent is a state parent training and information center. The Arc is an intellectual/developmental disabilities advocacy organization.

Patient encounters included well child, follow-up, or acute visits in a complex care medical home setting. BCM-CHofSA Complex Care Clinic faculty (i.e., the author) reviewed encounter notes carefully to ensure inclusion of the elements enumerated in the HEADS AT training tool,²¹ developed by Sadof, Gortakowski, Stechenberg, and Carlin as a road map for residents caring for CMC. Elements of this tool included home, education, activities, development/mental health, specialist review, ancillary services, and transitions. Learners received feedback following attending review of their notes and were instructed to revise encounter notes as necessary. Details of the HEADS AT tool were available in the facilitator guide (Appendix A).

- **Didactic:** Each didactic topic was viewed as a narrated video lecture (Appendices F-I), and learners subsequently completed posttests of knowledge. Posttest results and any questions were later discussed for clarification. The references for each didactic video lecture were included on its last slide, and learners were encouraged to review this supplementary literature.
- **Experiential:** Trainees visited on-campus clinical sites and off-campus community-based sites serving families of CMC. The goal of these activities was to immerse pediatric trainees in a holistic approach to the care of CMC to foster an improved understanding of the challenges faced by families and the resources available to them in their communities.

Learner Assessment

Pre- and posttests: We assessed learner knowledge using pre- and posttests (Appendix D).

Pre- and postrotation surveys: Learners self-assessed their skills and behavior when caring for CMC through pre- and postrotation surveys (Appendix E).

We designed the survey to assess learner skills and behaviors that we aimed to improve, as enumerated in the educational objectives for each didactic lecture. We delivered this survey to the first 12 learners of the rotation and, following review of survey design best practices,²² revised the survey questions. As a result, survey responses include the 35 learners who received the revised version and reflect responses only for topics presented in this publication.

We delivered the prerotation survey to learners, who ideally completed it 1 week prior to beginning the rotation. Following completion of the rotation and a subsequent inpatient rotation

(e.g., hospital ward, pediatric intensive care unit, or neonatal intensive care unit rotation), we sent learners an email with a link to the postrotation survey, a follow-up self-assessment of skills and behavior. We chose this timing of postrotation survey delivery to ensure that trainees were able to apply skills learned during the rotation to both inpatient and outpatient settings.

Reflection: We asked learners to write a one-page reflection at the end of the 4-week block rotation. Results of a qualitative analysis of learners' reflection statements have been published elsewhere.²³

Evaluation

Learners completed a postrotation evaluation of video lectures and site visits upon completion of the rotation.

Data Analysis

Descriptive statistics and frequencies were used to display learner demographic information, differences in pre- and postrotation self-assessed skills and behavior, and postrotation evaluation data. Pre- and posttest and pre- and postsurvey differences were compared using unpaired *t* tests.

A consent letter was attached to the orientation email, and pediatric trainees were offered the opportunity to opt out of deidentified data collection (but not rotation procedures) at the beginning of the rotation. This project was approved by the Baylor College of Medicine Institutional Review Board. No financial incentives were provided for participation.

Results

While 41 pediatric residents and six pediatric hospital medicine fellows completed the elective rotation between July 2016 and June 2020, data were available for 35 trainees (four PGY 1s, 11%; 12 PGY 2s, 34%; 16 PGY 3s, 46%; and two PGY 4s, 6%), of whom five (14%) had previously received formal instruction in complex care.

Learner Assessment

Pre- and posttests of knowledge: Thirty-five learners attempted 86 pretests and 78 posttests, demonstrating a statistically significant gain in knowledge (pretest: 26%, *SD* = 14%, vs. posttest: 78%, *SD* = 17%; *p* < .001).

Pre- and postrotation self-assessment of skills and behaviors: In total, 29 prerotation surveys (83%) and 15 postrotation surveys (43%) were available for analysis of self-assessed skills and behaviors. Survey items, median scores on 5-point Likert scales (either 1 = *not at all comfortable*, 5 = *extremely comfortable*, or 1 = *never*, 5 = *always*), and frequency of trainee selection of Likert-scale scores of 4 and 5 are displayed in Tables 1 and 2.

Table 1. Pre- and Postrotation Self-Assessment of Skills

Survey Item ^a	Median Likert-Scale Rating		% of Residents Selecting 4 or 5	
	Prerotation (n = 29)	Postrotation (n = 15)	Prerotation (n = 29)	Postrotation (n = 15)
In the outpatient pediatric primary care setting, how comfortable are you communicating with a subspecialty provider during or shortly following a visit for a child with medical complexity?	3	4	48 ^b	93 ^b
In the pediatric inpatient setting, how comfortable are you communicating with a subspecialty provider during or shortly following a visit for a child with medical complexity?	4	5	69 ^c	100 ^c
How comfortable are you managing gastrostomy tube feeding regimens independently in the outpatient primary care setting?	2	4	24 ^b	67 ^b
How comfortable are you troubleshooting gastrostomy tube issues (drainage, irritation, infection, replacement) independently in the outpatient primary care setting?	2	4	17 ^b	60 ^b
In the outpatient primary care setting, how comfortable are you communicating/collaborating with community-based resources or long-term services and supports?	2	4	3 ^b	60 ^b
In the pediatric inpatient setting, how comfortable are you communicating/collaborating with community-based resources or long-term services and supports?	2	4	3 ^b	67 ^b

^aRated on a 5-point Likert scale (1 = *not comfortable at all*, 5 = *extremely comfortable*).

^bp < .01.

^cp < .05.

When asked about barriers learners faced when communicating with other providers (both inpatient and outpatient) about CMC, learners cited uncertainty about preferred method of communication (prerotation: 68%, postrotation: 87%) and insufficient time (prerotation: 81%, postrotation: 73%) as the most common factors.

Evaluation

Fifteen evaluations of site visits (43%) and eight evaluations of video lectures (47%; video lectures were introduced in 2019 for 17 learners) were available for analysis. The rotation received overwhelmingly positive learner evaluations, with responses to the Likert-type questions illustrated in Figure 2. Learners shared strongly positive free-text comments regarding the video lectures as well.

Discussion

We presented a comprehensive complex care curriculum that incorporated didactic, clinical, and experiential learning

opportunities and addressed seven of 11 relevant EPAs. Learners demonstrated significant improvement in knowledge (Kirkpatrick level 2) and self-assessed change in behavior (Kirkpatrick level 3) in the care of CMC. This 4-week block rotation was overwhelmingly well received (Kirkpatrick level 1).²⁴

Although we noted substantial improvement in knowledge, changes in skills and behavior were less robust. Learners cited uncertainty about the preferred method of communication (postrotation > prerotation) and time (prerotation > postrotation) as the greatest barriers to communicating with other providers about CMC. The former barrier may have represented a need to standardize the contacting of providers within our institution or, perhaps, learner concern for interrupting providers during their workday. The gains in knowledge and skills may have resulted in time creating less of a barrier postrotation for learners; however, opportunity to overcome this barrier remains. An inability to demonstrate more significant improvement in skills and behavior

Table 2. Pre- and Postrotation Self-Assessment of Behavior

Survey Item ^a	Median Likert-Scale Rating		% of Residents Selecting 4 or 5	
	Prerotation (n = 29)	Postrotation (n = 15)	Prerotation (n = 29)	Postrotation (n = 15)
In the outpatient pediatric primary care setting, how often do you communicate with a subspecialty provider during or shortly following a visit for a child with medical complexity?	2	3	7	13
In the pediatric inpatient setting, how often do you communicate with a subspecialty provider during or shortly following a visit for a child with medical complexity?	4	4	62	80
How often do you manage gastrostomy tube feeding regimens independently in the outpatient primary care setting?	2	3	3	7
How often do you troubleshoot gastrostomy tube issues (drainage, irritation, infection, replacement) independently in the outpatient primary care setting?	2	2	0	13
In the outpatient primary care setting, how often do you communicate/collaborate with community-based resources or long-term services and supports?	2	2	0 ^b	20 ^b
In the pediatric inpatient setting, how often do you communicate/collaborate with community-based resources or long-term services and supports?	2	3	0	7

^aRated on a 5-point Likert scale (1 = *never*, 5 = *always*).

^bp < .05.

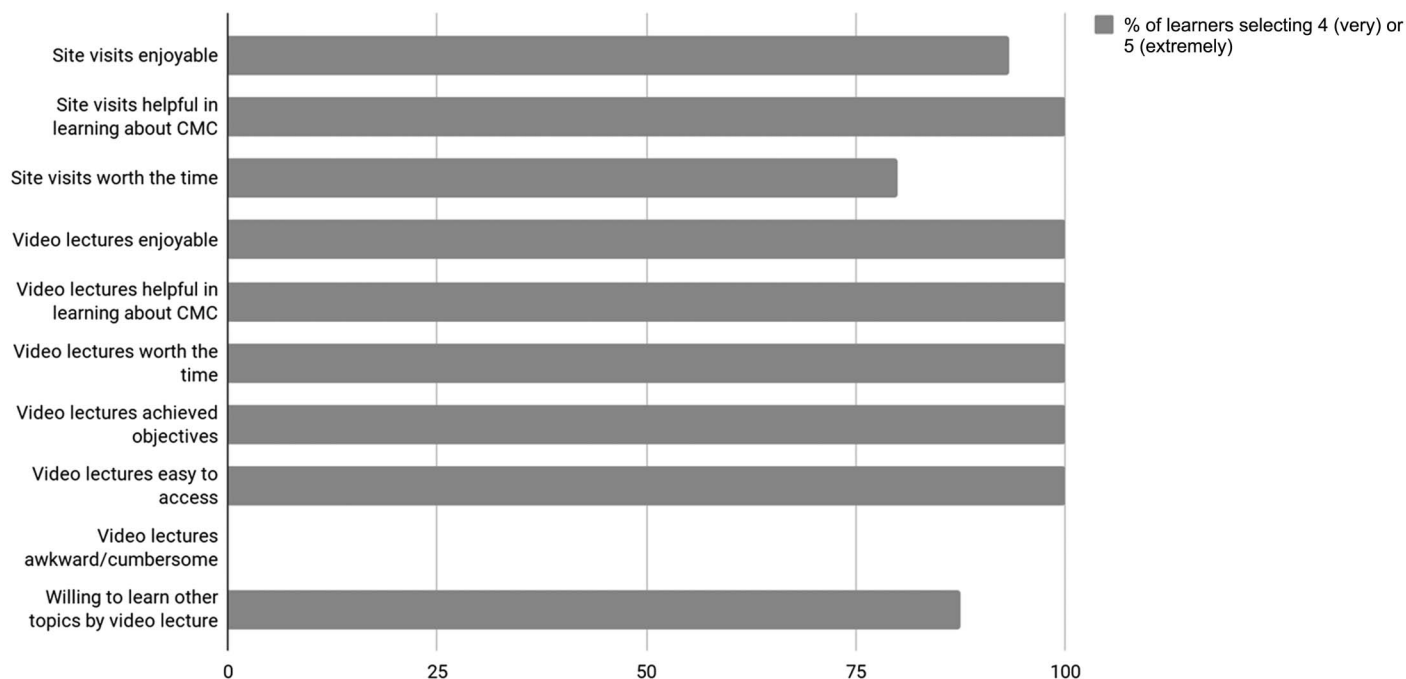


Figure 2. Complex care rotation evaluation. Site visits: 15 out of 35 (43%); video lectures: eight out of 17 (47%). Abbreviation: CMC, children with medical complexity.

deserves further investigation, perhaps in the form of a qualitative study.

Upon initial delivery, didactic lectures were presented in person and when time was available (often while awaiting rooming of patients or between patients). This proved quite challenging and resulted in two significant changes to the curriculum. First, the didactic lectures were converted to animated videos. Access to recorded animated videos allowed learners to pause and review key concepts addressed in the posttests as necessary. Second, learners were given ample protected time to view the videos. Learners provided clinical care during morning half-day sessions, and afternoons were protected for didactics and site visits. We recommend ensuring sufficient opportunity to participate in didactic learning, as lack of protected time for learners to immerse themselves in educational experiences has been shown to result in diminished engagement.²⁵

We encourage clinician educators to consider supplementing this curriculum with our previously published health care transition curriculum.²⁰ That curriculum is designed for weeklong delivery, offers further suggestions for how to best incorporate the instructional material within the structure of a residency program, and delivers the components of an eighth EPA.

Identifying clinical and experiential site leaders may prove intimidating. We encourage educators to search for local hospital-

based and community-based providers who espouse the shared mission of providing high-quality and compassionate care for CMC and an enthusiasm for teaching. Educators may find over time that interested clinical and experiential providers are the initiators of such relationships. We outline further details for establishing relationships with clinical and experiential site leaders in the facilitator guide (Appendix A).

We originally requested learners to return from each community-based site visit with a completed evaluation, which allowed both site visit representatives and learners to evaluate the activity. However, we found learners often forgot to take the evaluation with them to the activity. Several learners felt this evaluation created an overwhelming number of writing assignments. Learners also considered it to be more of a method of ensuring they attended the site visits, which was certainly not our intention. In the end, we opted to omit the community-based site visit evaluation and utilized the reflection writing assignment consistently. We have, however, included the community-based site visit evaluation here (Appendix J) should facilitators choose to use it.

Many pediatric residency programs have not incorporated complex care block rotations; other programs have transitioned to X+Y scheduling, no longer supporting 4-week sessions for such an elective. We present alternative methods to incorporate

the various topics, illustrating the adaptability of the curriculum. Each video topic can stand alone, and educators may opt to weave them into ambulatory rotations (care coordination), gastroenterology/nutrition rotations (evaluation and management of aspiration), or communication curricula (sharing unexpected news). Site visits that pair well with these topics (private duty nursing home visit for care coordination, parent-to-parent training and information centers for sharing unexpected news) can also be planned within these rotations. For programs that have not yet developed the essential relationships with community-based partners to assimilate site visits, we suggest the concept of Snowball ASSET Building (Appendix A). Alternatively, topics can be combined into weeklong themes (i.e., combine evaluation and management of aspiration and nonoral feeding and feeding tubes to create a feeding/nutrition week or combine care coordination and sharing unexpected news to create an interpersonal skills/communication week) and serve as individual Y weeks.

Encounters with CMC are typically lengthy; balancing clinic time constraints while allowing residents autonomy in clinical care can prove challenging. Moreover, the pressure to meet relative value unit demands often results in submitting billing codes based on time spent with this patient population and, more specifically, time the attending physician spends with patients/families. Educators may also note that families of CMC often do not disclose to residents their needs related to habilitative/rehabilitative therapies, durable medical equipment, or private duty nursing, which only further prolongs the clinic visit time when the attending physician returns to the clinic room. We find the most strategic method to tackle this is for the attending physician to enter the room with the resident and to observe and assist with entering orders. This allows for more efficient documentation, addressing all the families' needs effectively, and the ability to bill for services based on attending physician time spent with the patient/family. A discussion with the learner enumerating these various advantages not only preempts learner insecurity but also introduces the business of medicine to the learner. This recommendation is not necessary to deliver this curriculum effectively but may address a barrier that arises for faculty members who are negotiating both the provision of care for CMC and the training of learners.

A limitation of this complex care curriculum, though comprehensive, is that it does not fully address all 11 complex care EPAs, specifically, EPA 2 (evaluate and manage pain and irritability in CMC), EPA 5 (evaluate and manage common neuromuscular and skeletal issues in CMC), EPA 6 (develop and

implement safety/emergency plans for CMC), EPA 9 (facilitate goals of care discussions and introduce the concepts of palliative and hospice care for CMC—this EPA is partially addressed), and EPA 10 (advocate for CMC and their families in the community setting).⁹ Content for the curriculum was assembled prior to the modified national Delphi study that Huth, Newman, and Glader conducted in 2018 to identify curricular priorities for CMC.⁸ As we continue to deliver this educational curriculum, the addition of these omitted topics will be crucial to providing national expert-recommended instruction. We hope to publish separate curricular modules to address education and health care policy and advocacy for CMC, and we are currently crafting a palliative medicine supplement to this curriculum.

A second limitation of our project is that learner behavior is self-assessed and, moreover, that assessment of sustained behavior change is limited. Although the postrotation survey is distributed following an inpatient rotation, this timing may be variable, from 1 to 11 months following the complex care rotation. We chose this time to assess application of learned concepts in other settings. Upon reflection, we have included here an inpatient attending physician survey of the resident (Appendix K) to improve confirmation of the achievement of Kirkpatrick level 3. Educators may choose to utilize Appendix K to attain this degree of learner assessment at various points in time following delivery of the complex care curriculum (e.g., at 1, 6, 12, and 24 months).

Learners completed a limited number of postrotation surveys of site visits and video lectures. This likely reflected posttest/postrotation survey exhaustion among learners; however, the low survey response rate created a challenge for fully appreciating learner reaction.

Finally, learners participating in the elective complex care rotation opted to engage in this educational curriculum, introducing bias into the willingness to complete activities and survey responses. Delivery of the curriculum by weaving components into other required rotations may or may not result in similar positive outcomes; nevertheless, the development of complex care EPAs indicates the relevance of complex care knowledge, skills, and behavior in the training of emerging pediatricians.

In summary, this comprehensive complex care curriculum addresses both a significant gap in pediatric graduate medical education and a majority of the recently published complex care EPAs. The curriculum incorporates didactic, clinical, and experiential teaching methods and includes learning materials, assessment tools, and evaluation tools. The curriculum remains

adaptable by other users to allow individual pediatric residency programs to teach within their own structure.

Appendices

- A. Facilitator Guide.docx
- B. Rotation Orientation Email.docx
- C. Rotation Syllabus and Checklist.docx
- D. Pre- and Posttests.docx
- E. Pre- and Postrotation Surveys.docx
- F. Care Coordination.mp4
- G. Sharing Unexpected News.mp4
- H. Feeding Tubes and Nonoral Feeding.mp4
- I. Evaluation and Management of Aspiration.mp4
- J. Community-Based Site Visit Evaluation.docx
- K. Postrotation Inpatient Attending Survey of Resident.docx

All appendices are peer reviewed as integral parts of the Original Publication.

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Disclosures

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Ethical Approval

The Baylor College of Medicine Institutional Review Board approved this project.

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