Challenges and Potential Solutions to Educating Learners About Pediatric Complex Care

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Abstract

Objective: To identify existing challenges and potential strategies for providing complex care training to future pediatricians from a national group of educators.

Methods: Data were collected from pediatric educators involved in complex care at the Pediatric Educational Excellence Across the Continuum national meeting. Participants completed an anonymous 15-item survey adapted from the Association of American Medical Colleges (AAMC) Best Practices for Better Care initiative and participated in a focus group to understand the challenges and potential solutions to pediatric complex care education. Data were analyzed using grounded theory.

Results: Of the 15 participants, 9 (60%) were in educational leadership positions. All participants provided care to children with medical complexity (CMC), although 80% (n = 12) reported no formal training. Thematic analysis revealed learners' challenges in 2 domains: 1) a lack of ownership for the patient because of decreased continuity, decision-making authority, and autonomy, as a result of the multitude of care providers and parents' distrust; and 2) a sense of being overwhelmed as a result of lack of preparedness and disruptions in work flow. Participants suggested 3 mitigating strategies: being candid about the difficulties of complex care, discussing the social mandate to care for CMC, and cultivating humility among learners.

Conclusions: Residency education must prepare pediatricians to care for all children, regardless of disease. Training in complex care involves redefining the physician's role so that they are better equipped to participate in collaboration, empathy and advocacy with CMC. This study is the first to identify specific challenges and offer potential solutions to help establish training guidelines.

Keywords: child; chronic disease; graduate medical education; medical education; pediatric; residents; social identity

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What's New

The growing population of children with medical complexity mandates that medical educators provide appropriate and effective training of future pediatricians to meet the needs of these children and their families. This study identifies challenges and proposes potential solutions for educators.

Challenges to caring for children with medical complexity (CMC) often seem insurmountable. These children require health care providers to be adequately trained and dedicated to their care. They also need providers who are able to give detail-oriented and time-intensive coordinated care services. These medically fragile patients have chronic severe conditions, major functional limitations, and the most intensive health care needs.[1,2] Although CMC account for less than 1% of the pediatric population, their conditions contribute substantially to health care utilization and cost. Studies of children's hospitals nationally reveal that children treated for complex chronic conditions now account for 19% of patients, 49% of hospital days, and 53% of hospital charges.[3] CMC are also being discharged from the hospital with greater complexity, compounding their resource requirements and care needs.[4]

Health care providers struggle to provide adequate care to CMC and often feel inadequately trained to prescribe therapies to children with complex needs.[5,6] Studies show that less than 25% of pediatricians contact a hospital at the time of a patient's discharge, schedule visits to discuss recommendations of a subspecialist, or contact schools about a child's ongoing medical concerns.[7] Although pediatric trainees and educators believe that medical education for treating CMC should include an understanding of the patients' needs and their families' challenges both within and outside of the medical setting,[8] this type of education has yet to be incorporated into many pediatric training programs.[9]

The Institute of Medicine has stated the need to alter the training of the health care workforce to meet the current

needs of medically complex patients.[10] In addition, the longitudinal care of CMC is now a required competency for pediatric residents by the Accreditation Council for Graduate Medical Education.[11] Given the increasing complexity of childhood chronic disease and the shrinking number of workforce training hours, educators need to understand the challenges and potential solutions for appropriately teaching trainees about complex care. This study's purpose was to identify pediatric educators' perspectives about the challenges faced in training health care providers about CMC and to provide potential strategies to mitigate these challenges.

METHODS

STUDY SETTING

Participants were pediatric physicians and clinician educators who attended the Pediatric Educational Excellence Across the Continuum (PEEAC) conference in October 2013 and participated in a workshop and discussion held by authors (JB and AB), titled "Teaching Complex Care: Content and Strategies for Succeeding in a Challenging Climate." The conference was sponsored by the Academic Pediatric Association (APA), Association of Pediatric Program Directors (APPD), Council on Medical Student Education in Pediatrics (COMSEP), and Council of Pediatric Subspecialties (CoPS), and accredited by the Accreditation Council for Continuing Medical Education (ACCME). Conference leadership approved the research project and all study procedures were evaluated by the Institutional Review Board at Stanford University and determined to be exempt before the study's initiation.

SURVEY

At the start of the workshop, attendees were informed that part of the session would be used for research purposes and that they would be audiorecorded. Attendees received an information sheet describing the goals of the workshop and purpose of the study. Those agreeing to participate were asked to complete an anonymous 15-item survey adapted with permission from the AAMC's Best Practices for Better Care[12] initiative. The survey assessed the extent of education and training about complex care that participants had received and curricula offered at their respective institutions. Participants were asked to identify their current level of training and whether they held a leadership position at their institution. After surveys were collected, the workshop leaders provided an overview of the agenda, described the research study, and answered questions.

FOCUS GROUP

The workshop leaders then reviewed the concept of complex care and provided an overview of Kolb's[13] learning theory on steps involved in experiential learning, as well as examples of the theory applied to complex care education. Participants were then asked to respond to 2 questions in an open, semistructured format: 1) "What are the greatest challenges to teaching complex care to learners?" and 2) "What educational strategies can successfully address these challenges?" They were encouraged to describe their personal teaching experiences. Discussions of mitigating factors were grouped into 3 domains: educational strategies to address learner attitudes, motivation, and concrete experiences to support learners' engagement and acquisition of knowledge. These domains served as starting points for the discussion. The focus group lasted 80 of the 120 minutes designated for the entire workshop. Two authors (JB and ALB) transcribed the discussion. Participants' names and institutional affiliations were removed from the final transcripts.

DATA ANALYSIS

Analysis was performed by 1 content expert (JB) and 1 medical education researcher with expertise in qualitative analysis (ALB) using grounded theory.[14] Transcripts were hand-coded by both researchers who independently created their own codebooks. The researchers subsequently met to review and discuss codes and reach a consensus on key concepts. Topical codes were supplemented with emergent codes as analysis proceeded and were reviewed for consistency with existing concepts. The researchers then abstracted segments of text by individual codes and grouped related codes to identify themes. Major themes were determined according to 1) level of consensus of a concept among participants, 2) frequency of a concept throughout the discussion, and 3) level of depth of a concept. Major findings were summarized and provided to coauthors who attended the workshop to ensure themes identified aligned with their observations. To further assure the accuracy of results, all participants were emailed a summary of the major themes and asked to provide feedback on any misrepresented items.

RESULTS

SURVEY

In total, 22 people preregistered to participate in the workshop. Fifteen (68%) of 22 people attended the actual workshop, and all 15 volunteered to participate in the focus group and complete the study survey. Of the attendees, 80% (n = 12) were in faculty positions, 13.3% (n = 2) were fellows, and 6.7% (n = 1) were residents. Approximately 27% (n = 4) had master's degrees in education; 60% (n = 9) occupied educational leadership positions (eg, clerkship or residency program directors) at their institutions. Eighty percent (n = 12) reported having no formal training in complex care, but all (100%) were actively involved in caring for CMC.

Survey results showed that nearly half (n = 7) of participants reported that their institutions had no infrastructure for complex care education or practice, and 60% (n = 9) reported that no collaboration linked the complex care mission of their hospital with undergraduate medical education. Furthermore, the majority of participants responded that they did not know whether curricula in complex care were fully developed, whether undergraduate medical education in complex care was endorsed, or whether foundations for