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Original article

Use of a Self-Reflection Tool to Enhance Resident Learning on an Adolescent Medicine Rotation

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A B S T R A C T

Purpose: Adolescent Medicine (AM) educators in pediatric residency programs are seeking new ways to engage learners in adolescent health. This mixed-methods study presents a novel self-reflection tool and addresses whether self-reflection enhanced residents' perception of the value of an adolescent rotation, in particular, its relevance to their future practice.
Methods: The self-reflection tool included 17 Likert scale items on residents' comfort with the essential tasks of adolescent care and open-ended questions that promoted self-reflection and goal setting. Semi-structured, postrotation interviews encouraged residents to discuss their experiences. Likert scale data were analyzed using descriptive statistics, and interview notes and written comments on the self-reflection tool were combined for qualitative data analysis.
Results: Residents' pre—to post—self-evaluations showed statistically significant increases in comfort with most of the adolescent health care tasks. Four major themes emerged from our qualitative analysis: (1) the value of observing skilled attendings as role models; (2) the comfort gained through broad and frequent adolescent care experiences; (3) the career relevance of AM; and (4) the ability to set personally meaningful goals for the rotation.
Conclusions: Residents used the self-reflection tool to mindfully set goals and found their AM education valuable and relevant to their future careers. Our tool helped make explicit to residents the norms, values, and beliefs of the hidden curriculum applied to the care of adolescents and helped them to improve the self-assessed quality of their rapport and communications with adolescents. We conclude that a structured self-reflection exercise can enhance residents' experiences on an AM rotation.

IMPLICATIONS AND CONTRIBUTION

Using an innovative self-reflection tool at the beginning and end of an adolescent medicine rotation helped residents articulate their discomfort with and preconceived biases toward care of adolescents and mindfully set learning goals. This process stimulated thought-provoking discussions and helped to make residents' learning relevant to their future careers.

Recent articles commenting on the 20-year history of adolescent medicine (AM) rotations for pediatric residents have prompted us to reflect on our curriculum and the value of AM training experiences for pediatric residents. The required 1-month AM rotation constitutes only 3% of a pediatric resident's training; teaching and learning about the care of adolescents also occur in continuity and subspecialty clinics, inpatient units, and other settings. Ideally, skills developed in the AM rotation should carry over to all residents' interactions with adolescent patients. Some experts [1,2] have raised the concern that the current 1-month AM rotation may be inadequate to meet this need, especially since a standard curriculum for comprehensive adolescent health education does not currently exist.

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Emans et al. [1] surveyed pediatric residency program directors in 1998 and found wide variability in program quality that included the availability of AM teaching faculty, curricular materials, and coverage of key topics such as eating disorders and parent/child conflict. Over a decade later, Fox et al. [3] reported little change: there was a continued perception that teaching faculty were suboptimally available and that resources were inadequate to cover key adolescent health topics. The authors concluded that AM educators needed to articulate the key learning objectives for the AM block rotation and improve its quality.

Studies have shown that the pediatric workforce feels inadequately prepared to address important adolescent health care needs, such as substance abuse treatment [4] and behavioral health management [5]. Educators are experimenting with new methods to improve AM learning, such as skills-based training [6], interdisciplinary training [7], and the use of simulated patients [8]. What the AM literature does not appear to address, but our residents have repeatedly told us, is that they come to the rotation having experienced negative attitudes toward adolescents in their prior training. They are describing a hidden curriculum, promoted through informal comments and interactions with peers and faculty that has introduced subtle or overt bias into their approach to adolescent care [9,10].

In response to these concerns, we revised the pediatric residency rotation in AM at the University of Rochester. An important facet of the new curriculum was development of a self-reflection process to help residents assess their comfort with tasks of adolescent care and set and achieve goals relevant to their future work with adolescent patients. In the field of health professional education and accreditation, self-reflection is increasingly emphasized as an important goal. This new emphasis reflects the belief that self-assessment and lifelong learning are critical to one's ability to self-regulate as a mature, entrusted professional [11]. Although the literature supports the value of self-reflection in promoting mature thinking, finding meaning in a learning opportunity, and improving quality of learning [9], a recent review concluded that the evidence supporting self-reflection as a means of improving patient care or clinical outcomes has yet to emerge. Van der Vleuten's model of "informed self-reflection" may be more clinically relevant than previously tested methods: he describes an iterative, deliberate process that helps move learners toward a more critical, purposeful reflection on their practice [12]. As a first step toward teaching residents to engage in purposeful reflection, we asked them to complete a self-reflection tool at the beginning and end of our 2-week outpatient rotation, so they would reflect on their developing knowledge and skills.

We report here the findings of a mixed-methods study to evaluate the hypothesis that a self-reflection exercise would enhance residents' experience on the rotation by focusing their learning on self-identified areas of need and their career goals. The prerotation and postrotation self-reflection tool included both quantitative items on residents' comfort with 17 essential tasks of adolescent care and qualitative items that promoted self-assessment and goal setting. We also conducted end-of-rotation interviews asking residents to discuss their rotation experiences. These data were analyzed to assess how the self-reflection process affected residents' perceptions of the value of the rotation and its relevance to their future practice.

Methods

Sample

This study was conducted in a Pediatric Residency Program located in an Academic Medical Center in Rochester, New York. The program includes 24 categorical pediatric and combined internal medicine-pediatrics residents per year. Residents are between 25–35 years, are 76% female, and are 76% Caucasian, 15% Asian, and 8% Afro-Caribbean or Hispanic.

We invited all residents assigned to the AM rotation between November 2013 and November 2014 to participate. All were in their second or third year of training. They were invited by an email from the principal investigator (K.B.G.), an AM fellow who had no responsibility for rotation evaluations.

Setting

The outpatient AM rotation is a 2-week block, scheduled during residents' second or third year. A separate curriculum exists for the inpatient half of the 1-month AM requirement. The outpatient rotation consists of clinical experiences at multiple community sites, including student health, reproductive health, mental health, substance abuse treatment, and subspecialty and primary care AM. Each resident's experience varies by availability of sites and individual scheduling; they receive broad patient care learning opportunities, including exposure to a wide variety of patients and community providers, as well as multiple clinical sessions with AM faculty.

Curriculum revision

Before the curriculum revision, the rotation was organized around four broad expectations of learners that were discussed with the course director at the start of the rotation and then readdressed in a final case presentation. The previous curriculum did not include site-specific learning objectives or formal formative evaluations.

Our revision of the curriculum began with a needs assessment of residents who took the AM rotation between December 2011 and July 2012. Curricular changes included (1) organization of site-specific learning objectives around American Board of Pediatrics content specifications; (2) improved access to core learning materials; and (3) development of a formative, prerotation and postrotation self-reflection exercise, followed by individual discussions of the results. In keeping with the University of Rochester's adherence to the biopsychosocial model [13], as well as the residency program's focus on learner self-determination [14,15], we focused these self-reflection activities on setting personal learning goals, encouraging residents to self-reflect on their AM needs and prior experiences, and giving residents formative feedback in discussions with the faculty.

Development of formative self-reflection tool

The resident self-reflection exercise aimed to facilitate introspection and goal setting. They were encouraged to consider their areas of discomfort with adolescent care and career plans and identify topics for focused learning. We created a reflection tool (Table 1; Appendix 1) that included 17 Likert scale questions related to the respondent's comfort with adolescent care tasks.