Positive Impact of Transition From Noon Conference to Academic Half Day in a Pediatric Residency Program

Laura Zastoupil, MD; Amanda McIntosh, MD; Jenna Sopfe, MD; Jason Burrows, MD; Jessica Kraynik, MD; Lindsey Lane, BM, BCh; Janice Hanson, PhD, EdS; L. Barry Seltz, MD

From the Department of Pediatrics, Children's Hospital Colorado and University of Colorado School of Medicine, Aurora, Colo
Conflict of Interest: The authors declare that they have no conflict of interest.
Address correspondence to Laura Zastoupil, MD, Department of Pediatrics, Children's Hospital Colorado, 13123 E 16th Ave B302, Aurora, CO 80045-7106 (e-mail: laura.zastoupil@childrenscolorado.org).
Received for publication July 17, 2016; accepted January 15, 2017.

ABSTRACT

OBJECTIVE: To evaluate the impact of transitioning from noon conference (NC) to academic half day (AHD) on conference attendance, interruptions, and perceived protected educational time and to describe pediatric resident experiences with AHD.
METHODS: In this mixed-methods study, data before and after AHD implementation were collected. Quantitative data were analyzed with a 2-variable *t* test or chi-square test. Five focus groups and 5 individual interviews of pediatric residents were conducted. Data were analyzed using constant comparative methods, and were collected until reaching saturation. In accordance with grounded theory methodology, we developed codes using an iterative approach and identified major themes.
RESULTS: After AHD implementation, resident attendance increased from 55% (of residents expected at NC) to 94% (of residents scheduled for AHD) ($P < .001$); interruptions decreased from 0.25 to 0.01 per resident per hour ($P < .001$). Positive responses regarding perceived protected educational time improved from 50% to 95% (2015 class) and from 19% to 50% (2016 class) ($P < .001$). Thirty-two residents participated in focus groups and interviews. Analysis yielded 5 themes: aids and barriers to AHD attendance; teaching; curricular content; learning and engagement; and resident well-being. Residents felt aided attending AHD when clinical supervisors supported their educational time. Compared to NC, residents noted better topic selection but fewer covered topics. Residents valued protected educational time without clinical responsibilities and thought that small-group discussions at AHD facilitated learning. Although cross-covering was stressful, AHD positively contributed to resident well-being.
CONCLUSIONS: AHD improves resident attendance, interruptions, and perceived learning, and it contributes to resident wellness. More work is needed to mitigate the workload of cross-covering residents.

KEYWORDS: didactic; medical education; residency

ACADEMIC PEDIATRICS 2017;17:436–442

WHAT'S NEW

Transition from daily noon conferences to a monthly half-day block improved resident attendance with fewer conference interruptions, and was associated with resident perceptions of better learning. Although cross-covering is stressful, overall, this learning model positively contributed to resident wellness.

THE ACCREDITATION COUNCIL for Graduate Medical Education (ACGME) requires that residency programs provide regularly scheduled didactic sessions,[1] which are traditionally accomplished with daily noon conferences (NC). However, several problems exist with NC, including poor resident attendance, interruptions from clinical responsibilities, compressed time with duty hour restrictions, and misalignment with adult learning principles.[2] Some programs have responded by transitioning from daily NC to an academic half day (AHD), condensing didactic sessions into 1 half-day block per week.[2–6]

Few studies have evaluated the impact of transitioning to AHD. AHD conferences at several internal medicine programs have demonstrated improved conference attendance, resident satisfaction, and in-training examination scores.[2,3] Studies in pediatric programs, however, are even sparser. A midsize pediatric program reported improved resident attendance and satisfaction but no improvement in perceived learning after the transition to a block conference.[4] No previous studies have utilized rigorous qualitative methods to better understand resident experiences with an AHD, and the impact of transitioning to an AHD remains largely unclear.

A targeted needs assessment of our residency program's NC revealed poor resident attendance, frequent interruptions from clinical duties, and dissatisfaction with the lack of protected educational time. In response, in September 2014 we transitioned from NC to AHD. The objectives of our study were to answer 2 questions. First, what is the impact of the transition to AHD on resident attendance, conference interruptions, and perceived protected

educational time? Second, how did residents experience the transition to AHD at our institution?

METHODS

SETTING

Our pediatric residency program at the University of Colorado has 86 residents covering clinical services at Children's Hospital Colorado (CHCO), Denver Health Medical Center (DHMC), and University of Colorado Hospital. Our didactic curriculum takes place at CHCO and historically was a 1-hour NC occurring 4 days a week and broadcast to DHMC. Residents were not scheduled for NC but were expected to attend unless postcall, on vacation, or on night shift. Residents remained available for clinical responsibilities during conference.

In 2014, our program transitioned to AHD, in which resident learning is focused into a 3.5-hour block (Tuesdays, 1:30–5:00 PM, one 15-minute break). Several resident AHD schedules were discussed in planning meetings with our medical directors, and we ultimately agreed on the following: each resident is scheduled for one AHD per month; postgraduate level 1 (PL1) residents attend the first Tuesday, while a mix of PL2s and PL3s is divided between duplicate sessions on the second and third Tuesdays. Residents attending AHD are free from clinical responsibilities. Inpatient service coverage is provided by PL3s and family medicine interns covering for PL1s, PL2s cross-covering for one another, and cross-covering PL3s or hospitalists covering for PL3s. Residents do not return to work after AHD.

CURRICULUM STRUCTURE

AHD is a 3-year curriculum with an annually repeating intern curriculum and 2 PL2/PL3 curricula that alternate every other year such that residents progress through residency without repeating content. Currently no effective system exists to provide this curriculum to residents unable to attend. Content is delivered through minilectures, small-group case-based learning, board review questions, and games. Each month focuses on a subspecialty theme with topics selected through collaboration between residency program leadership and subspecialty faculty, and based on the American Board of Pediatrics Examination content outline. Unlike NC, preparatory reading material is occasionally provided before AHD, but it is neither mandatory nor enforced. All sessions are delivered under the assumption that residents did not prepare. Ongoing NCs include resident-led conferences, morbidity and mortality conferences, and a summer emergency series. Residents still receive lunch daily.

STUDY DESIGN

We performed a mixed-methods study with 1) quantitative data collected before and after AHD implementation and 2) qualitative methodology using focus groups and individual interviews of pediatric residents. We included qualitative methodology, as qualitative research is well suited to answer questions about changes in complex learning environments. Multiple methods of data collection were done to establish the trustworthiness of findings through triangulation.[7] Study participants provided written consent for the qualitative portion, and our institution's review board approved the study protocol.

PURPOSEFUL SAMPLING STRATEGY

Pediatric residents were recruited by e-mail to participate in focus groups (October 2014–May 2015) or individual interviews (June 2015), during which time the AHD format did not change. Focus groups were conducted after AHD sessions. Each resident could participate in one focus group or interview, and those who had experienced both NC and AHD were asked to compare them. Resident demographics were collected including gender, training level, and number of AHDs attended. We continued sampling until qualitative analysis indicated that themes in the residents' comments were repeating, no new themes emerged, and we had a robust understanding of all themes.

DATA COLLECTION

Study investigators prospectively observed 14 NCs (February–April 2014) and 10 AHDs (October 2014–April 2015), the latter requiring a longer observation period because of its less frequent occurrence. We collected data on resident attendance (percentage attendance for residents expected [NC] or scheduled [AHD] to attend, and percentage attendance for all residents at AHD), number of interruptions, and conference length of stay (LOS) (percentage of conference duration residents were present). Investigators reviewed resident schedules to determine the number of residents expected to attend NC in person. Residents rotating at DHMC (broadcasted NC) were excluded from NC attendance data. We collected ACGME survey responses before (2013–2014 academic year) and after (2014–2015 academic year) AHD implementation (percentage program compliance, interpreted by ACGME, with having an "appropriate balance between education and service") and program survey responses (percentage who strongly agree/agree with "I have protected time to attend didactic sessions" and "my clinical workload is appropriate when covering for others attending AHD").

Two investigators conducted 5 focus groups and 5 individual interviews. Focus groups lasted 30 to 45 minutes and included 4 to 6 residents; each interview lasted 15 to 20 minutes. Focus group participants received a light meal, and interviewees received $15 gift certificates as tokens of appreciation. We used a semistructured interview guide (Table 1) that focused on resident learning, engagement, and wellness as potential outcomes of didactic teaching. In accordance with rigorous qualitative methods,[8] we added questions to pursue insights that emerged about residents' perspectives as the study proceeded. Interviews were audiotaped, transcribed verbatim, and deidentified.