The Dance Between Attending Physicians and Senior Residents as Teachers and Supervisors

WHAT’S KNOWN ON THIS SUBJECT: Although all residents progressively assume responsibility for clinical skills under the teaching and supervision of attending physicians, senior residents also assume responsibility for teaching and supervising. This leads to a dynamic negotiation of responsibilities, particularly on clinical work rounds.

WHAT THIS STUDY ADDS: A better understanding of how attending physicians and senior residents negotiate shared responsibilities for teaching and supervising, and the context in which this negotiation occurs, may clarify assumptions and set expectations for resident training.

abstract

OBJECTIVE: To examine how attending physicians and senior residents negotiated shared responsibilities for teaching and supervising on clinical work rounds.

METHODS: As part of a larger ethnographic field study, we observed clinical work rounds on a General Pediatrics ward over 8 months, and interviewed 14 of 18 attending physicians and 9 of 11 senior residents whom we observed. Struck by the frequency of 2 codes in that data set (“stand back” and “step up”), we used the metaphor of a dance as an analytic strategy for understanding the dynamic relationship between attending physicians and senior residents.

RESULTS: Like a traditional dance with a priori choreography, and consistent with the traditional premise in graduate medical education, attending physicians frequently “stood back” and senior residents, accordingly, “stepped up” and took on teaching and supervising responsibilities. Less often, both attending physicians and senior residents assumed the lead, or attending physicians stepped up rather than entrust senior residents. The complex clinical context sometimes changed the choreography. Attending physicians and senior residents understood their mutual responsibilities but were not bound by them; they improvised to maintain high-quality patient care.

CONCLUSIONS: The metaphor of a dance enabled us to better understand not only how attending physicians and senior residents negotiate shared responsibilities for teaching and supervision on clinical work rounds, but also how the clinical context impacts this negotiation. A better understanding of this negotiated relationship may help to clarify assumptions and set realistic expectations for what it might take for senior residents to assume progressive responsibility for these responsibilities in today’s clinical context. Pediatrics 2012;129:910–915

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KEY WORDS

clinical education/teaching, resident education/training, pediatric residents, competency-based education

ABBREVIATION

GME—graduate medical education

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The relationship between attending physicians and residents has a prominent place in graduate medical education (GME). The traditional premise in clinical training is that residents learn when they progressively assume responsibility for clinical skills under the teaching and supervision of attending physicians. Senior residents learn as they progressively assume responsibility, not only for clinical skills, but also for teaching and supervision. This potential overlap triggers an interesting dynamic, who takes the lead when it comes to teaching and supervising interns and medical students?

We examined data, gathered as part of a large-scale, ethnographic field study, to answer that question. In this broader study, we investigated the explicit and implicit curriculum in General Pediatrics at a large urban children's hospital. We also investigated the notion of clinical work rounds as the “signature pedagogy” in an evolving clinical context. In both of these analyses, we were reminded not only of the dynamic relationship between attending physicians and senior residents, but also of the vicissitudes of the context in which that relationship unfolds. It seemed that constraints and characteristics of the clinical context, such as heightened efforts to improve the quality and efficiency of patient care, had implications for whom, and to what extent, senior residents assumed responsibilities for teaching and supervising. The next logical step was to extend our research with an in-depth analysis of the data to gain a clearer understanding of shared responsibilities between attending physicians and senior residents as it played out in a real-life clinical setting.

As we scrutinized data from our primary research, we were struck by the frequency with which participants described the role of senior resident as “stepping up” and the role of the attending as “standing back.” Such codes evoked the metaphor of a dance. Like a traditional dance with a priori choreography, there was a leader who “stepped up” and led the movements, and a follower who “stood back” and allowed the partner to have the principal part. In real life, however, constraints and characteristics of the clinical context altered the choreography. Attending physicians and senior residents, aware of the situation at hand, improvised.

Using the metaphor of a dance as an analytic strategy, we sought to understand how attending physicians and senior residents negotiate mutual responsibilities for teaching and supervising “in situ,” and to crystallize this understanding via a mental model. As our analysis progressed, we also searched the literature for an appropriate interpretive lens to help link our findings to important concepts in GME. In an effort to be transparent about the flow of our inductive analysis, we integrate insights gained from the literature in the discussion.

METHODS
Participants and Setting
We conducted our ethnographic field study on 1 General Pediatrics floor at a free-standing children’s hospital. On this floor, the medical service consisted of 2 medical students, 3 interns, 1 second-year resident, 2 senior residents (ie, third-year residents), and 1 General Pediatrics attending physician. Attending physicians were typically on service for 1 week (11 attending physicians were observed once; 3 were observed on 2-4 noncontiguous service weeks). All senior residents were on service for 1 month. The typical overlap between attending physicians and senior residents was 5 weekdays (minimum 1 day, maximum 10 days). For this analysis, we focused on attending physicians and senior residents because they shared responsibility for teaching and supervising on clinical work rounds. The dual, and sometimes discordant, purpose of clinical work rounds was to teach residents and to manage the workflow, covering an average of 12 patients on the General Pediatrics service.

Data Collection Methods
To gain access to participants’ ordinary activities on the General Pediatrics floor, D.F.B. conducted close, prolonged observation (143 hours) from January to August 2006. She got close enough to the participants on the medical service to understand their experience without taking on a clinical role. Although D.F.B. observed the full range of residents’ activity, most observation (67%) was during clinical work rounds. Rounds were scheduled from 8:00 to ~10:00 each weekday morning, divided between the General Pediatrics and subspecialty services. To gain access to participants’ perspectives about their roles and responsibilities, D.F.B. conducted in-depth interviews with 14 of 18 attending physicians, and 9 of 11 senior residents who were also part of the observation. We designed the interview guide to elicit responses about teaching and learning in general; 1 question asked specifically about shared responsibilities of attending physicians and senior residents. All interviews were audiotaped and transcribed. We managed data in the form of notes from observation and transcripts with Atlasti, a software program for qualitative research. The institutional review board at The Children’s Hospital of Philadelphia reviewed our study. We obtained written informed consent for the interviews; the observational component was deemed exempt.

Analysis
Details of our methods of analysis have been published elsewhere. In brief, D.F.B. inductively derived codes (ie, descriptive words that act as labels for key concepts) in an iterative process...
and applied codes to data. She revised the codes as patterns in the data emerged and substantiated the codes by comparing them with codes independently applied by co-investigators. To ensure completeness of coding, D.F.B. checked the entire database against the final code list.

Two codes, “stand back” and “step up”, were central to this supplemental analysis, and we limited our inspection of the data to those data that were relevant to these codes. We initially created a simple 2×2 table with relatively straightforward options that reflected the traditional premise in GME (ie, a traditional dance with a priori choreography). Because this simple table did not adequately account for contextual influences that sometimes led to improvisation, we created subcategories in 2 quadrants (see Fig 1).

Peers outside the institution critiqued and substantiated the dance metaphor’s dependability (ie, reliability) and goodness of fit.

RESULTS
Although it was not our intent to keep a strict count of codes, a rudimentary review of the numbers was telling. In the interviews, where participants shared their singular perspective, most codes (30/44; 68%) pertained to the attending physicians allowing senior residents to take the lead, that is, standing back. Fewer codes (14/44; 32%) pertained to the senior residents “stepping up.”

In observation, we observed social interactions that were reciprocal and sometimes difficult to navigate as the composition of the team and “personalities” changed from week to week. Of the interactions that we recorded in detailed notes, the majority (13/24; 54%) revealed that attending physicians and senior residents skillfully negotiated responsibilities, with the former standing back and the latter “stepping up” (see quadrant A below). Less frequently, we observed potential missteps (see quadrants B and D below).

Traditional Dance With a Priori Choreography

Quadrant A included interactions, which are typically considered the educational ideal; that is, the attending supervised from some distance, enabling the senior resident to learn by taking charge of teaching and supervising. In more than half of the interactions that we documented in detailed notes from observation, attending physicians and senior residents skillfully negotiated responsibilities in ways that appeared to optimize senior residents’ learning to teach and supervise. In the vignette below, the attending physician created opportunity for the senior resident to teach more junior trainees.

The team rounds on a patient with complex medical issues. The attending mentions a notable finding from his physical examination, but “stands back” by letting the senior resident lead teaching. The attending turns to the senior residents and says, “I heard a murmur. Okay Mr. Cardiologist, let’s go in and listen.”

The team enters the room and team members take turns listening to the patient’s chest. Although the attending physician poses the question, “What did you hear?” the senior resident takes over and responds to their answers.

In quadrant A, “standing back” on the part of attending physicians was an attribute of a good teacher; it was not neglect or passivity. A senior resident commented on the impact on learning when attending physicians committed to following versus leading the dance.

[Interview] Having attendings who understand that there’s a point of needing to let go is important. When you run into attendings who have a hard time of allowing you independence, that is a huge barrier to learning.

Attending physicians agreed that their standing back was necessary to prepare residents for future roles. One attending physician shared from her experience.

[Interview] I stand back and let them do their thing … I think that’s important because I didn’t get to do it very much of that in my own residency and when I was out in the community on my own, it was an adjustment.

Nonetheless, standing back did not come easily for attending physicians, particularly those who were more junior in their career. One junior attending remarked,

[Interview] I think it’s a tough balance, being a new attending and not being that far out. It’s harder for me to stand back and let them more run the show than it is for somebody with more experience.

In quadrant A, “stepping up” on the part of senior residents was an indication of

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<td>Senior resident stands back</td>
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FIGURE 1
Dance steps between attending physicians and senior residents on clinical work rounds. Shading represents the potential for improvisation.
a desire to teach and supervise; it was not challenging authority. One senior resident articulated her responsibility to “step up” as follows:

[Interview] The interplay between a particular senior and a particular attending governs how much you’re going to be the teacher and how much the attending is. If you have an attending who is more of a dominant personality and talks if no one else talks, then you have to really jump in and say your piece.

Quadrant B included interactions in which both attending physicians and senior residents “stepped up” and attempted to lead. In these patterns, senior residents typically initiated the lead and “stepped up,” only to have the attending follow suit. In the vignette below, senior residents attempted to teach the intern, but the attending essentially took charge and shut down the conversation.

The team is talking about a child with complex medical conditions who presents with elevated liver function tests (LFTs). The senior resident responds to the intern’s management plan and says, “They usually recommend a viral hepatitis panel, an autoimmune panel first, and then a DESCIDA [hepatobiliary scan]. Do you know what that is?”

The attending says, “I think we should just keep an eye on the LFTs.” The discussion of this point ends, and the intern moves on to the next item on the management plan.

One senior resident recalled a similar scenario and how it impacted her confidence as a teacher.

[Interview] You may use one antibiotic, but the attending prefers another. Sometimes it’s a little strange because you could talk for a while about how to treat pneumonia, and then have the attending say, “Actually, I would do this.” I don’t think that decreases your credibility as a teacher; but then when you don’t go with that plan, you feel kind of silly. You talked all this time about that antibiotic and then the attending says, “That’s not how we’re going to do it.”

Quadrant C included interactions in which both attending physicians and senior residents were reluctant to lead; in other words, both “stood back.” Although these interactions, in theory, could happen, they were never observed. Attending physicians saw themselves as “the person ultimately in charge.” As such, they were unwilling to jeopardize patient care for senior residents to learn how to supervise, and felt “compelled to fill the void” when senior residents did not “step up.” In terms of teaching, attending physicians regarded rounds as a prized opportunity to teach, and upheld their commitment to education when senior residents did not.

[Interview] I’m thrilled when seniors step up and put me in my place or leave me no room to teach. That’s fabulous because the teaching continues at the resident level. But I do feel compelled to fill the void when they don’t step up and am reluctant to let teaching opportunities go by if they’re reluctant to step into that role.

Quadrant D included interactions where, in contrast to the educational ideal presented in quadrant A, the attending “stepped up” and the senior resident “stood back.” Either attending physicians or senior residents could be off-kilter. On the 1 hand, some attending physicians had a “hard time letting go” and took control of teaching and supervising responsibilities rather than empower senior residents. On the other hand, some senior residents had “quiet” personalities that made “stepping up” a personal challenge. One senior resident remarked in an interview, “Everyone’s personality is a little different. I’m the kind to blend into the background and be a little quieter.” Although attending physicians acknowledged personality differences, they also acknowledged that not all residents were motivated to take the lead.

[Interview] I do encourage the senior residents, to take on that teaching role. Somewhere there need to get through the patients, but most of them are more eager to take on that role.

**Improvisational Dance**

The traditional dance with a priori choreography was, in and of itself, complicated. As in a dance, attending physicians had to commit to the energy of their partner and “stand back.” Accordingly, senior residents had to take the lead and “step up.” However, the unpredictable clinical context added a layer of complexity that changed the choreography. Attending physicians and senior residents were attuned to the context and responded to the situation at hand; that is, they improvised to maintain high quality patient care. Sometimes, improvisation occurred in quadrant A, when attending physicians “stood back” because they recognized that senior residents had a better grasp of the situation. One attending shared this story.

[Interview] I had just started on service and my 2 seniors were very strong personalities and they wanted to run rounds. We pushed back and forth a little and then I said, “OK.” But I was very comfortable because they knew what was going on, they knew the patients, and they were making good decisions.

More often, improvisation occurred in quadrant D. Again, maintaining the quality of patient care was paramount. Attending physicians, who may have previously “stood back,” actually “stepped up” in response to overriding concerns in the clinical context, for example, when a particularly complicated patient was presented. In the vignette below, the senior resident verbalized a management plan that the attending physician found unacceptable, given the child’s past medical history, interactions with the family, and past experience with children with this diagnosis.

The team is rounding on one of several patients with RSV. The infant has been hospitalized for 48 hours. The senior resident says, “She doesn’t need to be here anymore. She needs to go home.” The attending disagrees and says, “She’s an ex-preemie with a complicated history and she’s just getting better. I know this mom and she’s very anxious. I think it’s reasonable to watch her through the rest of the day.”

Other times, senior residents were more aware of their limits, knowingly “stood back,” and essentially invited the attending to “step up.” In the vignette...
below, the senior resident was intimidated by a “difficult family.” Sensing this, the attending drove the action and the senior resident followed. The team is rounding on a patient recently transferred from the ICU. The parents of the patient are reported as “difficult,” having requested their child be cared for, in part, by an out-of-state subspecialist. Discussing the plan for the day, the intern says, “I’ll talk to endocrine.” Rather than turn this responsibility over to the senior resident, as would typically happen, the attending says, “No, I’ll talk to them.”

**DISCUSSION**

The metaphor of a dance enabled us to better understand not only how attending physicians and senior residents negotiate shared responsibilities for teaching and supervision on clinical work rounds, but also how the clinical context impacts this negotiation. Consistent with the traditional premise in GME, participants viewed attending physicians’ “standing back” in conjunction with senior residents’ “stepping up” as the educational ideal. Attending physicians provided multiple opportunities for senior residents to lead the dance and gain competence in teaching and supervising. Nonetheless, our findings prompted us to move beyond this ideal when constraints and characteristics of the clinical context challenged its validity. Attending physicians and senior residents understood their respective roles and responsibilities, but were not bound by them. They responded in real time to the needs of patients.

In recent years, professional mandates for competency-based education have led to the scrutiny of progressive responsibility in GME.\(^1\)\(^2\)\(^7\) Our study corroborates empirical research that identifies multiple factors that impact when, and to what extent, residents assume progressive responsibility: factors related to attending physicians (eg, their availability, approachability), to residents (eg, their conscientiousness, perceived skill), to the clinical context (eg, time constraints), and to the task at hand (eg, an atypical case).\(^5\)\(^–\)\(^12\) This line of research informs efforts to translate core competencies into professional activities that are integral to the work of the profession and to assess competence, not with surrogate measures of isolated clinical skills, but based on attending physicians’ capacity to know when to entrust trainees.\(^13\)\(^–\)\(^15\) One such activity may be leading a health care team, which entails being able to teach and to supervise (C. Carraccio, MD, MA, personal communication, 2011). Our findings suggest that when it comes to teaching and supervising on rounds, competence in leading a team may mean knowing when to “stand back” and renegotiate responsibilities that require another team member to “step up.” This careful balance of leading and following seems critical to achieving quality care as well as quality education.\(^13\)

Prompted by the predominance of codes about attending physicians “standing back,” we surmise that attending physicians play a pivotal role in moderating when, and to what extent, senior residents assume responsibility for teaching and supervising. In our study, junior attending physicians consistently talked about the struggle to balance leading from a distance with an obligation to provide efficient and quality care. In light of this struggle, it stands to reason that they were more reticent than senior attending physicians to entrust residents with responsibilities to teach and supervise.\(^16\) Kennedy et al\(^11\) described 4 attributes of trustworthiness upon which attending physicians based their assessment of residents’ readiness for independent clinical practice: discernment (awareness of one’s limits), truthfulness (absence of deception), conscientiousness (thoroughness and dependability), and knowledge/skill. It may be that senior attending physicians are more attuned to these attributes.

As with all ethnographic research, issues of transferability and observer bias should be considered. Moreover, this report is based on post hoc data and represents a more in-depth focus on an emergent issue that was only partially addressed in the primary research.\(^17\) We do not claim to have captured all of the nuances of the dynamic relationship between attending physicians and senior residents (eg, how interactions between attending physician and senior resident might change as the year progresses or how familiarity a given attending physician has with an individual resident impacts the negotiation). Nor do we claim to have captured all of the constraints and characteristics of the clinical context (eg, how family involvement in rounds might impact attending physician-resident interactions or how institutional commitment to high-quality patient care prevents attending physicians and senior residents from “standing back” simultaneously).

**CONCLUSIONS**

We describe a dynamic dance between attending physicians and senior residents as they share responsibility for teaching and supervising on clinical work rounds. A better understanding of this dance, and the setting in which it occurs, may help to clarify assumptions and set realistic expectations for what it will take for senior residents to become progressively responsible for teaching and supervising in today’s clinical context.

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