

To Leave or to Lie? Are Concerns about a Shift-Work Mentality and Eroding Professionalism as a Result of Duty-Hour Rules Justified?

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Context: Medical educators worry that the 2003 Accreditation Council for Graduate Medical Education (ACGME) duty-hour rules (DHR) have encouraged a “shift work” mentality among residents and eroded their professionalism by forcing them either to abandon patients when they have worked for eighty hours or lie about the number of hours worked. In this qualitative study, we explore how medical and surgical residents perceive and respond to DHR by examining the “local” organizational culture in which their work is embedded.

Methods: In 2008, we conducted three months of ethnographic observation of internal medicine and general surgery residents as they went about their everyday work in two hospitals affiliated with the same training program, as well as in-depth interviews with seventeen residents. Field notes and interview transcripts were analyzed for perceptions and behaviors in regard to beginning and leaving work, reporting duty hours, and expressing opinions about DHR.

Findings: The respondents did not exhibit a “shift work” mentality in relation to their work. We found that residents: (1) occasionally stay in the hospital in order to complete patient care tasks even when, according to the clock, they are required to leave, because the organizational culture stresses performing work thoroughly, (2) do not blindly embrace noncompliance with DHR but are thoughtful about the tradeoffs inherent in the regulations, and (3) express nuanced and complex reasons for erroneously reporting duty hours, suggesting that reporting hours worked is not a simple issue of lying or truth telling.

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Conclusions: Concerns about DHR and the erosion of resident professionalism resulting from the development of a “shift work” mentality likely have been overstated. Instead, the influence of DHR on professionalism is more complex than the conventional wisdom suggests and requires additional assessment.

Keywords: Internship, residency, duty-hour regulations, professionalism.

IN 2003 THE ACCREDITATION COUNCIL FOR GRADUATE MEDICAL Education (ACGME), the organization responsible for accrediting residency-training programs in the United States, introduced one of the most substantial overhauls of graduate medical education in more than a century (Yoon 2007). In response to growing public and professional concern about the effects of sleep deprivation (long recognized as a fixed dimension of the residency experience) on patients’ safety, education, and residents’ well-being, the ACGME developed new duty-hour rules (which we refer to as DHR throughout this article). For the first time, a national limit was set on the number of hours that residents could work: no more than eighty hours per week, averaged across four weeks. Shifts now are limited to thirty hours in duration, with a rest period of a minimum of ten hours between them. As this manuscript goes to press, the ACGME is in the midst of revising the 2003 requirements. The ACGME has kept the eighty-hour workweek limit but has further specified restrictions on the number of consecutive hours that can be worked without a break. Significant changes in the proposed revision include more specific supervision requirements, further restrictions on the maximum length of any duty period, further specification of the length of the break required between shifts, and increased supervision of and adequate training in how to transition patient care from one person and team to another (Nasca et al. 2010).

Medical educators, residency program directors, and policymakers have expressed concerns about the unintended and potentially harmful consequences of DHR for patients’ care and residents’ training. That is, residents working fewer hours necessitate more care transitions from one doctor to another, which can lead to lost information, fragmentation of care, and a failure of coordination, all increasing the possibility of medical errors. In addition, DHR might constrain residents’ efforts to receive quality training when the demands of care conflict with their education.

Finally, DHR could interfere with the development of the “service ethic” that medicine’s leaders claim is the bedrock of professionalism.

The directors of residency programs responded to DHR by redesigning residents’ schedules, trying new educational approaches, monitoring their work hours more closely, and transferring the work traditionally done by residents to other health professionals and support staff (IOM 2009, 89). These changes were expensive, especially since no national funding was allocated to support them, and were not easy for all programs to adopt. In 2008, therefore, the Institute of Medicine (IOM) revisited the 2003 rules. Its report recommended a further reduction in work hours to alleviate residents’ fatigue and sleep loss, closer supervision of trainees, better handoffs of patient care responsibilities, and more stringent enforcement of regulations through the federal oversight of DHR (Iglehart 2008; IOM 2009). Implementing the new IOM recommendations is estimated to cost \$1.6 billion (Nuckols et al. 2009).

Concerns about DHR go beyond logistics, however. Statements made in the literature reflect deeper collective anxieties about how physicians training under DHR will approach their work now and in the future. These collective anxieties can be seen as a pair of binary oppositions: DHR does not merely create constraints that impede effective care but actually encourages an entirely new resident *mentality* that portends a new, less rigorous *professional morality* (Botta 2003; DeBord 2009; Fischer 2005; Higginson 2009; O’Neill 2009; Pories 2004; Rosenbaum 2004; Rybock 2009). This new mentality supposedly is manifested in residents who are concerned primarily with their own needs, are eager to sign out when they have reached their eighty hours, and feel little to no ownership of, or responsibility for, their patients. In essence, under DHR, residents would cease to be “professionals” but would become “shift workers,” regulating their work hours according to the clock instead of their patients’ needs. Even if residents do not adopt this shift work mentality, they still will have to behave in an unprofessional way: lying about the number of hours they worked. Either way, DHR may undercut the core values of professionalism.

Concerns about the Development of a Shift Work Mentality

A large literature considers residents’ and attending faculty’s perceptions of DHR’s impact on various aspects of patient care, the training

environment, residents' quality of life, and their professionalism (for an overview, see Longnecker 2006). Some of these studies consider the specific influence of DHR on resident professionalism. For example, Ratana-wongsa and colleagues (2006) surveyed residents in internal medicine, neurology, and family practice programs, asking them whether DHR had affected their professionalism. Forty-five percent felt less professional; 32 percent felt no change; and 19 percent felt more professional. The survey also offered an opportunity for residents to comment on the impact of DHR on their professionalism. Some residents suggested that DHR had reduced the amount of time they had to talk with patients and families, which had led to a decrease in shared decision making. Other residents said that their colleagues appeared to be less accountable to their patients and had little difficulty saying "I've got to go" and handing over their work. The residents' responses specified the professional behavior that they felt DHR had compromised.

In editorials and letters to the editor, opinion leaders also have expressed concerns about the impact of DHR on residents' professionalism (Higginson 2009; Rosenbaum 2004; Rybock 2009). Peterson and colleagues (2006) found that the directors of family medicine residency programs were particularly worried about the impact of DHR on their residents' professionalism. The authors surveyed 369 directors of family medicine programs and included two open-ended items in their questionnaire, one of which asked, "What are your concerns regarding how duty hours regulations are affecting your residents and their training?" This question elicited a number of strong responses. The program directors expressed concerns about the development of a "punch-the-clock" mentality. One respondent commented, "Residents feel more like clocked employees, less like professionals. It's not 'my' patient." Respondents also felt that DHR had encouraged a mentality of "entitlement" to free time that undermined the commitment to patients' needs.

In editorials, surgeons have written about their particular concerns regarding this shift-worker mentality, that the eighty-hour workweek was "the antithesis of a profession" (Fischer 2005), that it took away ownership of work and personal responsibility (Botta 2003), and that it threatened to break surgeons' particular bond with their patients (Fischer, Healy, and Britt 2009). Pories observed that "we have diminished a profession that took great pride in total devotion to patient care to one where the time clock rules whether to finish a task, the patient be damned" (2004, 515). Several writers feared an emphasis on personal lifestyle over patients' care (DeBord 2009; O'Neill 2009).

Studies of surgeons' perceptions of DHR echo these apprehensions. Hutter and colleagues (2006) interviewed attending surgeons and found that the increase in shift-work mentality was their predominant worry. Vanderveen, Chen, and Scherer (2007) surveyed teaching faculty about their views on DHR and found that a quarter of the respondents offering additional commentary also were concerned about an increasing shift-work mentality, as well as the residents' lack of commitment to patients.

Leaving or Lying?

In a recent letter to the editor of the *New England Journal of Medicine*, John Rybock (2009), an assistant dean and the compliance officer for graduate medical education at Johns Hopkins, calls attention to the erosion of professionalism as a cost of DHR that should be considered along with the financial cost of reform. He explains that complying with ACGME rules reduced residents' decision making and autonomy, both of which are key components of professional behavior:

We took away their control, preventing them from making the decisions that characterize a professional. We now force them to leave a patient with whose treatment they are intimately involved or to cease the observation of an instructive surgical procedure midstream. *It did not take long for this system to produce residents who would either walk away when their time had expired or else lie in order to violate the rules.* Although we added "professionalism" as a training goal, we began giving our trainees the choice between abandoning a patient and lying. (Rybock 2009, 930, italics added)

In complying with the ACGME rules, Rybock says that his institution "transformed the trainees in [their] core programs from dedicated professionals into shift workers" (2009, 930).

Rybock is not alone in his concern about forcing residents to choose between fidelity to patients' care or lying about duty hours. In a survey of pediatric, internal medicine, and general surgery residents at one institution, Carpenter and colleagues (2006) found that 49 percent of respondents admitted to underreporting their work hours. These authors argued that DHR has actually created ethical dilemmas for residents who

want to tell the truth. Referring to the many residents who admitted to underreporting their hours, they stated that

it is our collective desire that residents be truthful to patients (e.g., obtaining informed consent), to families (e.g., delivering bad news), and to their colleagues (e.g., reporting medical error, admitting limitations in knowledge/capability, reporting disability of a coworker, identification of system-based defects, and so on). The fact that these regulations are prompting a deviance from this practice of truthfulness is of concern. (Carpenter et al. 2006, 530)

Carpenter and colleagues pointed out that having to decide whether or not to lie when reporting hours worked was a significant source of anxiety for residents because it undermined their professional commitment to telling the truth in other areas of behavior.

A general surgery resident described this anxiety in a letter to the editor of the *Journal of the American College of Surgeons*, baldly titled "Should I Lie about My Work Hours This Week?" The resident describes a situation in which his program director asked him to leave work because he was approaching eighty hours. He then summarized the moral dilemma that he felt DHR had created for him: "So which was the greater good? To do the right thing for patients and my education or, to be honest, carry a clean conscience and play by the rules that I did not set or sign up for when I started in 1999?" (Grogan 2005, 635).

Grogan then pointed out how difficult this decision was for him each day, when his responsibility toward his patients and his desire to obtain valuable experience were challenged by the need to follow a rule whose wisdom he questioned. He thus decided to leave when the rules dictated he do so but was uneasy with the trade-offs. He asked his father, a general surgeon who trained "back when men were men and giants walked the earth," for advice (2005, 636). Grogan was surprised when, after ascertaining that he could be caught in the lie, his father advised him to follow the rules in order to protect his credibility and career. Grogan's letter elicited a reply from a vascular surgeon who questioned his father's advice: "But, what would Father have done in a similar situation during his own training years[?]. He might have figured out some kind of 'work-around.' Turn in an honest card, but with footnotes." The vascular surgeon went on to lament the influence of DHR on the

training environment: “What kind of world has this become when a surgeon cannot fulfill his unwritten covenant with his or her patient?” (Tilson 2005, 490). This physician’s response is typical of the heightened tension surrounding residents’ working time and their daily choice of leaving or lying. It also implies that lying in this situation may have a different meaning than it does in other contexts. When lying about hours worked means honoring an “unwritten covenant” to a patient, what is the lie’s status as a moral breach? How do residents navigate this tension? How do they report their own hours? How do they feel about lying and telling the truth in relation to a questionable but consequential rule?

Given the widespread and intense fears about DHR’s eroding professionalism through the development of a “shift-work” mentality or requiring dishonesty when reporting, we decided to observe how residents actually behaved in relation to and felt about DHR, leaving or staying at work after their shift, and reporting their duty hours. The following questions framed our research: Do residents “watch the clock” and exhibit a shift-work mentality? Or do they violate the rules in the name of a higher “professional duty”? How do residents perceive decisions about staying or leaving work when DHR conflicts with other priorities? How do residents report their duty hours? Are they accurate? Do they lie? Do they think about lying in this context as a threat to their personal or professional integrity? What do they think about the reporting process? What does it mean to them? We know that there are a nearly infinite number of points along a social continuum, whose poles are the clock-watching shift worker and the dedicated professional, but we picked up the question as we found it in the literature that discussed the impact of the 2003 ACGME duty-hour rules on residents’ professionalism.

Methods

Study Design and Data Collection

In 2008, we conducted participant observation and in-depth interviews with internal medicine and general surgery residents affiliated with a large, elite medical school in the eastern United States in order to understand the influence of DHR on different specialties. We used

qualitative methods to generate hypotheses regarding how DHR affected the provision of clinical care and resident education. Participant observations and in-depth interviews are particularly well suited to gathering data that complement survey data. Instead of simply asking residents a fixed question about their behavior, participant observation allows the researcher to *see* these behaviors unfolding. One strength of qualitative research is that a careful inspection of social processes by an “outsider” with a fresh perspective may reveal features of those processes no longer noticed or questioned by those engaging in them each day (Garfinkel 1967; Geertz 1977; Simmel 1971).

Although the main concern often is that observation changes practice, the impact of observation in medical settings is often minimized because the pace and intensity of the subjects’ workload overwhelm their attempts to be on their best behavior (Patton 1999). In addition, habitual patterns of workplace behavior are hard to modify. For example, Reiss (1967) found that while observing police behavior, by the end of the first shift those officers who accepted bribes had no compunction about accepting them in the presence of an observer. Denying the observer effect is too extreme, but it is impossible to explain it. To place our data in the context of survey and interview data gathered by others gives us great confidence that despite the site-selection bias, our data permit a more nuanced description of how residents’ work hour limits interact with and help shape current understandings, operational definitions, and formal assessments of professionalism.

Our research team, made up of four graduate students in sociology, spent three months in the summer of 2008 observing house staff going about their daily work. The majority of our time (2.5 months) was spent in a Veterans Affairs (VA) hospital and the remaining time in the major university hospital. Our study was approved by the institutional review board of both these institutions. Each of us spent approximately two weeks shadowing the same subintern,¹ intern, or resident, although we did vary the amount of time spent shadowing any one individual. We attempted to tie our observation period to the scheduled shift of the resident we were observing. We arrived at and left the hospital with them, saw patients, went to attending rounds, attended educational conferences, observed operations, and sat with them while they entered notes and orders into computers. We observed their work on nights, weekends, and holidays, including spending the night with them at the hospital as part of their on-call responsibilities. In all, we closely

observed approximately ten general surgery and twelve internal medicine residents, although we spent much of this time observing groups of residents together in various settings.

We told the residents we were interested in learning about their day-to-day work flow, the social organization of their work, particularly in the face of DHR and the various issues that they had to deal with each day. As observers, we tried to be as unobtrusive as possible and assured them that we were not there as surveillants for the program. We were careful to pay attention to the impact of our presence on the behavior of the residents we were studying. After the initial adjustment (usually only a few hours), they had become used to our presence and did not appear to be “on their best behavior.” They occasionally engaged in gallows humor (Shem 1978) and used us as sounding boards for their anger and frustration with various aspects of resident life. They actively engaged with us, occasionally treating us as medical students and including us as a part of their team. Each of us brought along a piece of paper or a small notebook and took notes whenever it felt appropriate to do so and typed up more detailed field notes at the conclusion of each day. Together, we accumulated more than a thousand hours of observation and 640 pages of single-spaced typed notes. One of the project’s principal investigators and authors, Charles Bosk, reviewed all the field notes, and we met weekly, both collectively and as individuals, with him to discuss data collection issues.

Using a semistructured format that grew inductively from observations, we conducted seventeen in-depth interviews with residents. The interview sample consisted of residents that we had observed over the summer, as well as one respondent who was referred to us. We interviewed seven general surgery residents, one physical medicine and rehabilitation resident (who had rotated onto the surgical service while we were observing), eight internal medicine residents, and two medical students who had rotated through the internal medicine and general surgery services as subinterns. Because we conducted the interviews after we had finished our observations, we were able to ask more nuanced questions and to refer to specific events we had observed. We also knew many of our respondents quite well from the time we had spent with them, which likely produced more detailed and candid responses. All the interviews were digitally recorded and transcribed.

Data Analysis

All our field notes and interview transcripts were uploaded to QSR International's NVivo 2 qualitative data analysis software. Our analysis was largely inductive, although we approached the data with an interest in the residents' perceptions of DHR, which we used to create our code categories. Two of us (Julia Szymczak and Joanna Brooks) coded the documents separately and then together discussed the codes, generated the themes, and resolved any discrepancies. Although we did not formally assess intercoder reliability, Szymczak and Brooks generally agreed on the themes identified and consulted Bosk throughout the analysis. The themes that we found in the data echoed and resonated with earlier studies of medical socialization. We circulated memos throughout our data analysis and used them to refine our coding schema and theme generation (Charmaz 2006). Although we used pseudonyms for all the names in this article, we did maintain the respondents' actual year in the program and specialty (internal medicine [IM] or general surgery [GS]).

Results

We found that residents (1) occasionally stayed in the hospital to complete patient care tasks when, according to the clock or arrival of replacements, they could have gone home; (2) did not blindly violate DHR but were aware of the tensions surrounding it and tried to balance them as well as possible while giving priority to patients' care; and (3) offered nuanced and complex reasons for reporting their duty hours erroneously, which suggests that reporting the hours worked was not simply an issue of lying or telling the truth.

1. Even when residents were entitled to leave work, they often chose to stay because they had a strong sense that there was a "right" or a "thorough" way to care for patients, which took precedence over the clock and their personal concerns.

Residents usually cared for patients without giving much thought to the clock or the number of hours worked.² One IM intern described this attitude toward work:

No. I mean, eighty hours is such a hard thing. I think that's why they put it as an average, because there's going to be times when you have to stay. You don't even feel it. It's not like you're like, "Oh, I wish I was at home." There's things you have to do and that's just hard . . . you can't put it in a certain time frame to get everything done that needs to be done. You're depending on other things to get finished. You're waiting for someone else to do this to a patient or waiting for a test to come back. Things like that have to happen.

This explanation illustrates why it is important that the ACGME specify the eighty-hour weekly limit as an average over four weeks, because it allows residents to be flexible in responding to the unpredictable nature of medical work. A GS intern told us in an interview how he felt about his working hours: "I mean it's not something that I keep tabs of, it's not like I have a little journal and I'm like OK, I worked an extra three hours today."

Residents did not just drop what they were doing when the clock reached a certain hour, particularly when they needed to leave inpatient wards to attend their continuity clinic, as these two observations of IM residents made clear:

Mary [an intern] is ready to sign out to Peter [an intern]. She calls him and tells him to come down to the third floor. Mary tells me, "This service is kind of crazy." I ask her about clinic this afternoon, and she grumbles, saying that it is really annoying to have to travel four blocks and leave behind all the stuff she has to do here. She says she is going to be really late but that she can't just pick up and leave.

Jesse [an intern] and I meet with Brian [Jesse's senior resident] at the nurses' station. Brian says that he thinks they need to talk to Mr. X's family today. Mr. X has inoperable and terminal colon cancer. He offers to do it this morning while Jesse is at clinic. She says she wants to be in on it for continuity of care because the family knows her and trusts her. She says, "If I'm late to clinic, I'm late to clinic."

These excerpts show that norms of time (being late) are different here than in other work environments (Zerubavel 1979). The resident in the first situation understands that the demands of work on an inpatient unit are such that she cannot just drop what she is doing and leave, even to meet the demands of another aspect of her training. The resident in the

second situation gives priority to continuity of care when she decides to stay late in order to deliver bad news to the family of one of her patients.

We observed that during their everyday work, residents did not “watch the clock” but often stayed to complete tasks even when they had reached their work-hour limit or their schedule indicated that they could go (i.e., that another resident had arrived to take their place). This observation was based on spending many hours with the same residents during their workweek. We did not have reliable work-hour data for the residents (e.g., from computer log-ins) whom we shadowed. But we were able to roughly calculate their work hours based on our own comings and goings. In addition, the residents that we shadowed engaged us while we were observing them and would make comments to us about what they were doing and their motivations for doing it. We gathered no data suggesting they hid “clock watching” from us.

A number of examples from our field notes reveal that residents stayed at work later than the clock or their scheduled hours required. In the following excerpt from our field notes, two IM residents stayed late on their post-call day (the day following a continuous thirty-hour duty period) to care for a critically ill patient who developed an extremely rapid and irregular heartbeat. They decided to use adenosine (a drug) to better visualize his heart rhythm and to try to slow it down. Instead of saying, “Time’s up, I’m out of here,” they stayed to administer the medication and speak with the patient’s wife. A nurse commented approvingly on their decision to stay:

I just happened to be hanging out against the bay and a nurse tells me how good it is to see the intern and his senior resident still here. She says, “I’m glad to see that they are breaking their own rules.” She tells me how things are worse for nurses post duty-hour reform: “Their [residents’] attitudes have changed. Now, when a nurse contacts them for something and they are about to leave, they say, ‘My shift is done so, call the cross-cover.’” She gestures to the intern: “Look at him. If he had left, he would have missed this great clinical experience [giving adenosine].”

This nurse feels that the residents have developed a shift-work mentality in response to DHR, but she also notices this exception to her general rule.

We cannot unpack the nurse's statement any further, as we did not systematically observe or interview nurses. Future research, therefore, should consider the impact of DHR on interactions between residents and nurses, particularly communication about tasks that need to be completed by the end of the day, when a resident is signing out tasks to the covering resident.

In the next example, in which a resident chooses to stay late, Alex (a junior GS resident) has been on call all night, and usually he would sign out to his replacement (Rob, a junior resident) at 6 A.M. But there is an extremely sick and complicated patient in the medical intensive care unit (MICU) who does not seem to have received much treatment throughout the night and is coughing up blood. So Alex stays and deals with the problem because he believes the patient is in critical condition.

Rounding takes a long time this morning. At 7:20 I ask Alex why he's still here. He tells me, laughing, that they got a late start (the incoming resident was late). "You have to subtract twenty minutes." We go to the MICU and see the patient with a GI bleed. Alex asks the nurse to do something, and he says, "Give me a minute." Alex retorts: "He's been here since midnight." Alex also says, "You got to be all over this guy," and the nurse, who is not moving as fast as Alex would like, says, "I like to have gloves on with blood." At 7:49, Alex is still on the computer and talks with the MICU doctor about all the orders that need to be carried out. The MICU doctor, who was on call the night before, has disheveled hair and asks Alex, "Do you need anything else?" The MICU doctor gets on the phone right away and calls the blood bank. Alex tells the MICU doctor to talk with the family and "let them know he's in pretty critical condition; he could die." Alex later tells Rob: "You saw up there, you gotta take care of them. If we hadn't gone up there, he would have died." Alex tells Rob he has to be "on top of this guy," and Rob says: "I know, I know the drill." At 8:26 Alex finally leaves.

On a different day, Rob is told by his chief, Greg, to sign out early to Alex, who will be covering for the night.

This is the Friday that Rob is supposed to sign out to Alex, since Alex is going to be on for the night anyway. I ask Rob when he's gonna sign out, and he says, "If I sign out to Alex, then Greg has to get everything from Alex, and that's how shit gets lost." Rob doesn't sign out early. At 6:18 P.M., Alex, Rob, and I meet Greg in the PACU

[post-anesthesia care unit] for sign-out. Meanwhile, Rob is getting texts from his dinner partner. Throughout these interactions, Greg uses me as an audience and tells me that “this is the A team; they don’t listen to me yet” [referring to the fact that Rob was still there and hadn’t signed out early]. Greg tells me Rob is “defiant, and a wise ass, and good.” At 6:40 P.M. Rob finally leaves.

In the first two instances, the residents decide to stay longer at work to manage critical situations, despite, in the first case, violating DHR and, in the second case, being able to leave because his replacement has arrived. In the third instance, the resident decides to stay later than necessary in order to eliminate an extra handoff and reduce the risk of losing information about the patient. The residents we observed were sensitive to issues surrounding transitions of care.

When we asked residents about DHR in our interviews, they described situations in which they or their colleagues had violated the rules in order to complete a task thoroughly. One IM senior resident described the challenges she faced in managing an intern who consistently violated DHR:

Right. So, I have an intern. He is an excellent physician. Oh, he could be my doctor any day, and he’s still younger than me in training. He would break duty hours left and right, and I was his resident, so I was freaking out because I’m always trying to get people home at noon.

I was very big on it, but what was he doing? He was calling their primary care doctors, writing notes, making sure they knew exactly what happened to that patient. This was not a lazy person who was wasting any amount of time. People called him inefficient. He was, in my mind, probably the most efficient doctor there was, but it took more time than we had, and there’s a part of me that wished I cared as much as he did, and I had to give him a recommendation for something, and I had to speak to a supervisor about it, and I said, “People call him inefficient. It’s really because he’s doing what we all should be doing,” but there was not time to do it, and he’d be there two hours late. I’m not talking fifteen minutes. He would call that doctor, he would call the family member, the kind of things that people wanna believe doctors would do for them, and he did them all.

This intern was performing work that “people wanna believe doctors would do for them.” This resident recognized the tensions inherent in disciplining someone who performs excellently by one set of criteria but

not another. This intern's behavior was consistent with a more general norm we observed in the residents, namely, that they would disregard the time they had worked in order to complete their work according to their standards. Residents reported in interviews that violating duty hours did not bother them so long as violations served to complete patient care tasks to their level of satisfaction. An IM intern stated:

So, I'd rather stay late myself. I don't really care if I violate duty hours because I think that those are important times when [in a handoff, patient information can] drop. I'd rather do it because I'm the primary; it's my patient. That's why, like the day before yesterday, Saturday, we were post call. Me and my senior resident, we stayed till maybe 2:00 P.M., when you know you're supposed to be out of the hospital by 12:00 P.M. or something like that. It didn't matter because I wanted to finish certain things and then hand it off to the day float.

A GS intern remarked:

I'm willing to work as much as it takes; I knew that coming in. I knew that surgical residency is not easy; I knew that you're going to be worked hard. And that's a decision that I made and I'm willing to, so if I have to be here until from 5:30 in the morning until 9:30 at night in order to get the things done that I need to get done or that I want to get done, then I'm willing to do that.

These residents felt that there was a right way to care for patients that might mean violating DHR. But this was considered appropriate behavior because it was more important to do what's "right" than to follow the rules for time spent performing the work. In an interview, two IM interns described the challenges of their workload:

Respondent 1: So I would say realistically you could see your morning patients in fifteen minutes if you're really efficient, fifteen minutes per patient.

Interviewer: What do you think about that?

Respondent 1: Right, and the only way to actually meet that goal is to not do a thorough job as a physician. Meaning peek your head into [the patient's] room and say, "Hey, how's it going? Any pain?" Or,

like, address their one major issue, like, if they have belly pain, saying, "Hey, how's your belly feel? OK? OK, 'bye."

Respondent 2: Oh yeah, you know the physical exam where you just stick the stethoscope on one spot on their chest and that's it. That's how you do it that fast. A full physical exam would take fifteen minutes.

Respondent 1: That's not being a good physician. That's shocking. But is that the reality? . . . I mean if that's what the work hours are gonna entail and if you're gonna keep everything at status quo and expect you to do the same amount of work in less time, eventually it's not gonna make any sense. It's not. It doesn't add up. If your cap is ten patients and you have an hour to see them all, it's impossible.

Even though these residents want to improve their efficiency as clinicians, they also have a strong sense of what it means to be a "good physician." There are certain shortcuts they refuse to take (the pseudostethoscope exam), even if it means violating DHR. Respondent 1 expressed frustration at the program for what he felt was an unreasonable workload. Although this was not a universal view (the program we studied had implemented a number of strategies to reduce residents' workload in order to improve compliance with DHR, such as night float, day float, nurse practitioners, and nonteaching services), respondent 1's comment about being expected to "do the same amount of work in less time" is likely to be a very real concern for programs with limited resources as further changes to DHR, which are estimated to be very expensive, are made (Nuckols et al. 2009; Payette, Chatterjee, and Weeks 2009). Contrary to fears about the erosion of professionalism through decreased accountability to patients, we found that residents put the care of their patients first and recognized that the exigencies of working in a hospital sometimes would take precedence over leaving when they wanted to do so.

2. Residents realize and are aware of the tensions inherent in DHR and try to balance as best they can what often appears to be a "zero-sum game." Although they recognized that some situations required their violating DHR, they did not do so without considering the consequences.

While the residents we observed stayed at work to get the job done right for their patients, they were aware and spoke thoughtfully of the trade-offs for regulating their work hours. They struggled with the tensions in providing safe patient care, managing their fatigue, and obtaining quality training. Residents were particularly aware of the transaction costs that DHR imposes on patients' care, specifically that the cost of reducing fatigue was a greater number of care transfers:

Stuff definitely gets missed through the signout because there's something you forget to tell somebody, and then it doesn't happen or you can't tell somebody everybody's active issues and remember them all. But that's just the nature of the system. I mean there's no way to really get around that without its being abused as it used to be when you just never slept and you were always here taking care of the people. You knew the patients really well, but your life was complete misery, so I don't know. (junior GS resident)

I think it's a really fine balance between being more handoffs you do or longer hours when people are tired, not paying attention, and distracted. (IM intern)

An IM intern elaborated on what this "really fine balance" meant in practice:

I think it's all about how you hand off your patients. If you're, like, I need to get out of here, and you just leave without doing the things you need to do and without giving a good handoff to someone, then yeah, it's probably not a good idea. Yeah, that's probably not good for your patients. But I think that those tasks that you sign out to people are not things that you have to do because you admitted the patient. There are some things that you have to do because you admitted the patient, like discharge paperwork. It's really hard for a person who doesn't know the patient at all to follow up their discharge paperwork. It's those are things I think the admitting physician should do, but other things, like, I'm going to do a procedure on you . . . well, if I were a patient, I would rather someone who'd just come on that day who didn't even know me do the procedure than someone who knows me but was here all night. And up all night. You know?

Balancing the trade-off between fatigue and continuity of care, especially given a lack of evidence for which is worse (a fatigued resident or a poorly handled handoff), requires making thoughtful decisions about work and

how it is organized. This means making fine judgments about what work is most appropriate for the admitting doctor and what can be signed out to a colleague. There is no one way in which residents should manage these tensions; rather, interns and residents are always thinking about and making decisions based on the particular situation.

Residents were also aware of the impact of DHR on the attendings' workload and the residents' education, as this field note makes clear:

A GS senior resident voices another concern to me. He brings up how much attendings have to work: "Cut back on our work, protect us, that's great, but when you save residents, you hurt attendings. And you want attendings fresh, they're teaching us, doing cases." He also tells me that if they keep regulating down the hours for residents, then they are just going to be delaying residents' working crazy hours until they're an attending, and then as new attendings, they will be at a disadvantage because "we won't have been trained to work those long hours."

Our findings were consistent with other studies of residents' perceptions of DHR, which are that residents are especially aware of what they perceive to be a "zero-sum game" between fatigue and discontinuity (Jagsi and Surender 2004; Myers et al. 2006). Carpenter and colleagues (2006) were correct in pointing out that DHR creates ethical dilemmas for residents that provoke anxiety about the best way to provide patient care and receive training in an environment characterized by a rapid pace and intensity of work. Residents do not see DHR as a simple issue of staying or leaving work. Rather, everyday choices involve a number of trade-offs: To stay or to sign out? To sleep or to get to know patients better? To help residents or to hurt attendings? To be rested or to see fewer operations or procedures? To sign out or to feel physically abused? These are the questions of a group thinking about what it means to behave like a *professional* under considerable human, organizational, and regulatory constraints. These choices force on residents the judgment that *professional behavior* means choosing a course of action when one set of rules conflicts with another.

The residents in our study noted both the lack of evidence for the actual form of the rules (as one senior IM resident said, "Eighty hours came out of nowhere") and the inconsistent research evidence that DHR has reduced mortality (Shetty and Bhattacharya 2007; Volpp and

Landrigan 2008; Volpp et al. 2007a, 2007b). Their decisions about staying or leaving in a particular situation are not based on evidence. Rather, it is likely that residents make decisions based on the specifics of the situation, their past experiences (if they had a near miss while fatigued or because of a sloppy handoff, where they went to medical school, etc.), how they feel about working when tired (some of our respondents said that they did not believe that fatigue made them more likely to make mistakes), and the local resident culture about the most appropriate way to manage their workload.

Although the residents stayed at the hospital in order to get their work done satisfactorily, even if this meant violating the DHR, they did not do so without thinking about it. They acknowledged that it was not feasible to be in the hospital all the time, even though that would be the ideal for continuity of care. As one senior GS resident pointed out, “Obviously, the most continuous care is for that doctor to take care of that patient 24/7 for their entire hospitalization, but that’s unrealistic.” Our respondents suggested that there were limits on the maximum amount of time that a resident should work. In other words, the organizational culture tolerated working extra-long hours only up to a point. The precise point involved applying a rough rule that was difficult to calculate for a specific case. Violations were tolerated when necessary to provide care that could not be provided by someone else without jeopardizing other patients (while also recognizing that the good a tired resident could do for a patient was limited). As the following excerpt from an interview with a senior IM resident shows, noncompliance has limits:

Interviewer: Interesting, and he [an intern who consistently broke the DHR] got some crap about it.

Respondent: Well, breaking duty rules, but he could not, and yeah, maybe he was slow doing it, but he did it well.

Interviewer: Did he get talked to? Did you have to talk to him about it? Did you have to say, “Hey, stop doing this”?

Respondent: Sometimes, yes, I had to stop him. I was his resident on the wards, but prior to that, I was his resident in the intensive care unit, so I had more than one experience with this individual, and when you’re in Q3 [taking overnight call every third night], you need to get home at some point . . . he’s there until 7:00 at night, 8:00, and then we’re on call the next day. At the end of the

day, for his safety, for the safety of the next patient he's gonna see, it has to end at some point.

This resident expressed her frustration at having to stop her colleague from working extra-long hours but recognized that at some point, the drawbacks of the intern's being there outweighed the benefits. Making this distinction is part of the "really fine balance" that residents attempt to achieve for themselves and encourage in their colleagues each day.

Residents also implied that there was a limited tolerance for people working extra-long hours, citing the ever-present danger that extra hours would be interpreted as inefficiency rather than dedication. As one senior GS resident observed in an interview:

I mean I think if anything, [the eighty-hour workweek] has forced people to become more efficient. . . . As opposed to waiting till the end of the day after all the cases are done in the operating room to round on all the patients on the service, rounding at like 2:00 or 3:00 between a case or something. Or, you know, having your team round without the chief and basically have one person sign out for the team. Those are things you implement to kind of like make things more efficient. From what I understood before the eighty-hour workweek, people would just sit around and wait for their chief to finish in the operating room, and then, like, they'd be just waiting and, you know, for them to get out of the OR to sign out. I don't think that's acceptable any more.

The residents recognized that working extra-long hours can be dangerous to patients, discourage efficiency, make learning difficult, and contribute to burnout. Although we observed that residents worked without regard to the clock, this did not justify routinely working excessively long hours. The only acceptable justification for extra hours was the demands of patient care that could not be met in any other way, save for a violation of DHR. The residents understood DHR as rules that they sometimes could ignore but generally had to obey.

3. Residents often forgot how many hours they worked, reported inconsistently and sporadically, and, as a result, "fudged" their hours. This "fudging" was not understood as a moral breach. Trainees have a number of reasons for erroneously reporting their duty hours, which, when explored, reflect their priorities and

directly address some of the concerns about the development of a “shift-work” mentality.

The residents offered a number of different reasons for erroneously reporting their duty hours. First, consistent with what we previously reported, they simply did not keep close track of their hours worked; they did not “clock watch.” The programs we observed used retrospective self-reports, so when the residents eventually logged their hours,³ many said they simply forgot how long they had worked. A GS intern explained how he reported his hours:

Interviewer: How do you report your duty hours?

Respondent: I report them exactly as scheduled.

Interviewer: Yeah?

Respondent: Well, a part of the problem is that when I go back at the end of the week to put my hours in, I forget what I’ve worked. So I just default to what I was scheduled. I mean, honestly I really could not tell you what I worked last Friday or I could not tell you . . . I couldn’t tell you what I worked last Wednesday. I have no idea. So when I look at my schedule and I see that I was scheduled from 6:00 A.M. to 6:00 P.M., well, that’s probably pretty close, I don’t know.

An IM intern described how she reported her work hours:

Interviewer: How do you report your hours?

Respondent: Yeah, so we report them on a computerized system. . . .

So we just go on, and it’s like a calendar and you highlight the amount of time you’ve been there each day. It’s really easy to use. And, yeah, I do report mine honestly to the extent that I can remember. I don’t remember to do it every day, so I end up doing it a week or two later, which, you know, probably contributes to slightly erroneous reporting, but I don’t think it’s horribly off at all.

The following is an excerpt from our field notes in which we observed a GS intern reporting his duty hours:

Before his senior resident gets there, I watch the intern as he fills out “My Duty Hours” for the week. I look with him as it says that

“exceptions” to the rules will be marked in red or something like that. Basically, they have a drop-down menu (call, educational, patient care, etc.), and they highlight the amount of time they did each, and as the intern does his, he says, “That doesn’t look like much time, does it?” and I agree, the way it is pictured makes it seem like there are a lot of hours *not* worked. He tells me he does this a week at a time. He guesses at the beginning of the week: “I don’t know what I did at the beginning” [of the week], he tells me. I ask him, so you knowingly put the wrong hours? [since his “guessing” happens to be no more than eighty hours], and he says, “Well, not knowingly.”

Second, we found that the residents reported sporadically and inconsistently because they felt that the process of reporting added to the burden of work by being another system to learn and manage. Not surprisingly, this new work burden fell to the bottom of the list of tasks to be carried out.

Interviewer: Do you feel that the potential ramifications of breaking hours are severe enough that it motivates people to adhere to them?

Respondent: With the program, it is.

Interviewer: Yeah, I mean in terms of I know about accreditation. . . . I know that it’s a recall system.

Respondent: I think it’s a stupid system.

Interviewer: Yeah?

Respondent: As someone who probably is more supportive of duty hours than most people, I did not do it. First of all, I’m terrible with computers. It was yet another system. I couldn’t remember my password. Give me a break with all that stuff. If that was going to take me an extra twenty minutes a week of working, I’m not doing it. It was so stupid. I’d rather spend my time getting my job done and getting my people out. The computer system . . . the whole system is ridiculous. Talk about efficiency, you have eighty-two passwords, and systems . . . the login, and the this and the that, and then check your schedule, then check the labs, and check . . . honestly, they need one system. That takes minutes here and minutes there. That was just dumb, really silly, so that really stopped productivity, and at the end of the day, I couldn’t even remember how to get into the thing to log in my hours after one vacation once. I was like, “Forget that.” I’m a Goody Two-shoes,

so that was hard for me to deal with, but then I embraced it. I was like, “If it’s so stupid that I’m not doing it, forget about it.”
(senior IM resident)

A senior GS resident remarked:

In the real world, that’s super time-consuming for no real gain on your part, so in the real world, what you end up doing is you wait ‘til the end of the week, and then you just try to remember what time you came in, or what time you left each day, and sometimes you can, sometimes you can’t, so you just make it up if you can’t remember, and for me personally, I’m OK with doing that, and I justify it by saying that I know that I’m under eighty hours, and so whatever a half hour here, a half hour there in terms of if I can’t remember exactly what time I left, it doesn’t really matter.

Third, the residents admitted purposely underreporting their hours, but the meaning of “lying” in order to violate the rules was not as clear as Carpenter and colleagues (2006), Grogan (2005), Rybock (2009), and Tilson (2005) stated. By more deeply considering why residents say that they lie about their hours, we decided that perhaps lying in this case was not the antithesis of professional behavior and instead was a reasoned response when faced with conflicting imperatives. Residents are neither shift workers nor professionals; they are captives in dynamic situations.

Trainees say that they and their peers purposely lie about how many hours they worked for the following reasons. First, the residents lied about their hours to protect the program, their chief resident, and their work team. The penalty for programs that violate DHR is either probation or withdrawal of ACGME accreditation, and the loss of accreditation has serious consequences. Programs without accreditation are not eligible for Medicare GME funding, and residents must complete an accredited residency program in order to be eligible to sit for board certification in their specialty. Thus the stakes are high for both the program and the individual. As one GS intern explained,

I mean honestly I don’t, I can’t, imagine that I work less than eighty hours a week. I don’t know, maybe I do. It’s hard for me to remember, but I’m willing to work as much as it takes. . . . And at the end of the day, I care enough about myself, my chief, and the program that if I have to go back and forget that I worked three hours, then it’s not a big deal.

From an interview with a senior IM resident:

Respondent: But I don't think it's accurate, and I think the kind of people like my superstar intern probably wasn't honest about his hours.

Interviewer: No.

Respondent: We all feel there's a team spirit about protecting your residency, or whatever it is, and nobody wants to have it discredited, but I think we're lucky because we are from a program that really wanted to hear what the problems were.

From an interview with a GS subintern:

Respondent: It's not in my personality to kind of be this, like, well, to take a word of the day, a maverick and to kind of go against the grain. . . . You don't want to be that guy who's, like, I'm working ninety-seven [hours]. I'm working a hundred [hour shift], you know, because you don't want to compromise the integrity of the program that you're in to potentially have it fined or, you know, "de-" whatever.

Interviewer: Lose accreditation?

Respondent: Or lose accreditation. Bad things will happen which will inevitably affect you.

Second, the residents felt that their ability to perform work efficiently was an important benchmark for evaluating their worth as a resident. They underreported the hours they worked to avoid being labeled inefficient or calling attention to themselves. As one senior GS resident said,

The fact is that the junior residents in general, I think, are . . . they are the ones that are categorical, who are gonna become general surgery residents. I think they're more motivated to try to still be like the old generation. Because that's what they've seen. They've seen all these other . . . they've seen all their mentors act like that, and they're trying to be like that. And I can say my current intern is very much like that. He's, like, I won't tell anyone what my hours are. I always work from 6:00 to 6:00 type of thing when he's there at 8:00 or 9:00 at night.

An excerpt from our field notes illustrates how the residents judged their own performance in relation to the time it took them to complete tasks:

In the stairwell we run into Marge, an IM intern. Marge is post-call, and we ask her if she is going home soon. Marge sighs and says, "I don't know. When I go to report my hours this week, I'm going to have to say that I was here on Friday until 8:30 P.M. They're going to say, 'You're the worst intern ever, you're so slow.' In an ideal world, I'd leave by 1 P.M."

A GS subintern pointed out that honestly reporting excessive hours worked could bring unwanted attention:

Then people will get pissed at you [if you honestly report working ninety-seven, one hundred hours per week] even if they say, "Oh, it's under anonymity." I don't really believe that. I think that once you're in the hospital, it's a really small world. Gossip travels really quickly. You tell one person or you even don't, and people find out. I think next year I'm kind of, as I hate to admit it, I'm just going to go with the flow and kind of do what everybody else does.

Although reporting work hours may appear to be an individual task, the residents understood it as highly *social*, insofar as they considered the implications of reporting a certain number of hours for their work group as a whole, as well as for their own place within it.

Although the trainees believed that some of them lied about and fudged the number of hours worked, they felt more comfortable accurately reporting their hours because they felt their program leaders were responsive. This was especially true if there were egregious violations resulting from what they perceived to be *systemic* or *structural* problems related to their work. Time spent working in the MICU is a good example of this distinction, as many residents explained to us that "you just can't get out of the MICU." This was understood almost universally to be true, so it was acceptable to report these violations to get the program leadership to change the amount of time that residents spent in the MICU (which was done). Residents in both IM and GS felt that their program directors took the violations seriously as an indication

that something about the program's structure needed to change, as the following excerpt from our field notes suggests:

I chat with a senior IM resident a bit more about duty hours, and he explains to me that he is especially careful to report his hours accurately when he goes over the eighty-hour limit because "that is how the program gets tweaked. The administrators are very responsive to what we report."

A junior GS resident also explained:

Our program director will tell you 100 percent of the time that he wants you to report exactly what hours you worked. He doesn't care if it's 150 hours; he wants to know so that he can fix it . . . so I think the system, at least at this program, because you're being supported by the program director to report honestly, I think it works pretty well, because the months that I actually have been on a rotation where I really was working morbidly long hours, and I had no control over it. It wasn't because I was choosing to stay later and tie stuff up. It was because I literally couldn't get out of the hospital. I have reported it honestly . . . because I knew that I had the support of my program director, and it was a rotation where they weren't getting everyone out in the amount of time they need to get people out, and something needs to be done to fix it. I think there's a chance that in other programs, the system might not be working, where you have a program director who's sort of old school and doesn't really like that they've got a [regulated] workweek and thinks that it's bullshit and people are lazy, and so if you're reporting overhours, they might not be directly yelling at you, but they're still losing respect for you and thinking of you as weak or whatever, and so that's really forcing people to underreport . . . so I think the most important thing is that you have someone in charge who unconditionally says, "I wanna know how many hours you're working. I don't care what it is. If I don't know how many hours you're working, I can't fix it."

The fact that the residents reported accurately when they were routinely forced to break DHR because of systematic scheduling problems indicates that they were making an important distinction. They generally adhered to the rules and did not mind "fudging" their hours when they (1) chose to stay late to "tie stuff up" or (2) were unable to leave because of occasional situational exigencies. But if they were asked to work extra hours routinely, they would start to record their time more carefully in

order to force structural change. Residents think about their work in a more nuanced way than program directors who fear shift work and predict the erosion of professionalism.

Discussion

We cannot generalize our observational study of how internal medicine and surgical residents from the same training program responded to DHR to the population of all training programs. We are aware that the response to duty hours is likely to vary across settings. Our study, however, did identify those factors most likely to account for variability in compliance with DHR as well as those influencing how residents interpreted and responded to DHR. The three most important factors were as follows.

First, the local culture greatly influenced how the residents interpreted their compliance with DHR. We observed a widespread consensus that when compliance with DHR conflicted with the patients' needs, then the residents placed a higher priority on the patients' needs. Moreover, when compliance with DHR threatened patients' safety or quality of care, such as when making extra handoffs, following up on critical moments in care, or holding sensitive conversations with patients and families, the residents also placed a higher priority on optimizing the patients' care than on complying with DHR.

Second, the residents had no problems with accurately reporting non-compliance when the causes were perceived to be "structural." Both the internal medicine and surgery residents regarded their program directors as sources of strong support. On rotations in which work intensity made it impossible to do an adequate job in the time allotted, frequent reports of being out of compliance on specific rotations sent a strong signal to program directors that the staffing on these rotations needed to be changed. In the programs we observed, the residents believed that the program directors would be receptive to these signals and would resolve the problem.

Third, the residents had two strong incentives to report compliance with duty-hour rules, even when they had been noncompliant. First, being out of compliance threatened the program itself. Programs that were out of compliance faced negative consequences, the worst of which was a loss of accreditation. No resident wanted to have a part in their

program's losing accreditation. Second, they feared reporting more than eighty hours would hurt their reputations within the program, that they would be seen as inefficient, slow, or incompetent. These two strong incentives were reinforced by a reporting system based on recall, often weeks after the hours were actually worked, which allowed residents the default position of saying that they "honestly did not remember," rather than that they were deliberately lying.

Our exploration of the reasons for erroneously reporting hours suggests that the residents may not regard lying about their hours worked as a violation of their professional commitment to telling the truth in other circumstances (e.g., in interactions with patients and families). Instead, it may reflect allegiance to a professional culture whose autonomy and integrity they are invested in protecting (Freidson 1970, 2001). Residents are not subject to a single system of rules. Duty-hour rules compete with other rules that residents have to follow. This abundance of rule systems often contradicted one another, with one canceling out or neutralizing another (Sykes and Matza 1957). In this situation, the residents then were free to choose which rule to honor. In the local culture that we observed, the demand for high-quality patient care took precedence over duty-hour rules. Accordingly, the residents felt that they were honoring professional values, exercising independence, and resisting a transformation into shift workers.

All this does not mean that duty-hour rules have not had an impact on hours worked. The very fact that regulations exist appears to have set an upper bound on acceptable noncompliance. Peers exert pressure on one another to get out of the hospital as soon as their shifts are completed. But there is some tolerance at the margins for an extra hour here or there, especially when that extra hour is seen as integral to quality care.

Conclusion

Our work indicates that the intense fears about duty-hour rules' eroding professionalism through the development of a "shift-work" mentality or dishonesty in reporting hours worked are likely overstated. In at least one setting, residents did not behave as mindless automatons that followed the rules without considering their impact on their patients' care. Furthermore, our work suggests that a local culture that places a high priority on quality care and safety discourages the honest reporting

of work hours in some situations and that program directors who are responsive to and supportive of residents' needs encourage honest reporting in other situations. In addition, there are both group and individual disincentives to reporting violations of DHR.

More work is needed in other settings to determine the amount of variation in compliance with DHR. Observational research in other settings will help determine how the factors that we identified here—(1) a local culture emphasizing quality care and patient safety, (2) strong supportive and responsive program directors, and (3) group and individual disincentives to honestly report hours worked—affect compliance with DHR.

Endnotes

1. A subintern is a fourth-year medical student who essentially replaces an intern for four weeks. At the medical school affiliated with our observation site, the subinternship program is very rigorous, and for all intents and purposes, a subintern has the same responsibilities as an intern.
2. The only negative case to this rule was the 30-hour (24-hour limit + 6 hours for continuity) rule in IM. This rule was invoked in IM trainees' daily post-call labor, but residents (especially interns) found it very difficult to observe because the work involved with new admissions from the night before often became frenetic by the middle of the day, right when they were supposed to leave. As one senior resident suggested, "The problem is when you admit people, you try to leave at noon [on your post-call day], but there always are a lot of things to tie up 'cause there's a lot of stuff going on when people come into the hospital . . . the time when there's stuff most going on and that's when you're trying to leave."
3. The frequency of reporting clearly varied, as these excerpts show. Some residents logged their hours every week; others, every two weeks; and still others forgot for months at a time.

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Acknowledgments: This work was supported by the U.S. Department of Veterans Affairs, Veterans Health Administration, Office of Research and Development (SHP 08-178). Charles L. Bosk received additional support from a Robert Wood Johnson Health Investigator Award. We thank Jacob Avery and Keri Monahan for their substantial data collection efforts. Without their commitment, we would have offered only a thin, rather than a thick, description. Mary Dixon-Woods of the University of Leicester anticipated one of our reviewers' objections, which speeded up the revision. Finally, we would like to thank the editor and reviewers of *The Milbank Quarterly* for their insightful comments and suggestions.