

The 80-hour workweek turns that concept on its head. It recasts residents as shift workers who do “soon weary” of the arduousness of their work. And residents find themselves trapped between two opposing images. By day, they are Halstedian heroes — tireless individualists tending to patients with complex conditions. But by night, as they pass off patients and responsibilities to each other, they morph into team workers, a role that requires completely different skills. And it’s precisely at the brittle moment of transition — in the confusing, interstitial space between individual and collective responsibility — that critical errors occur. In retrospect, each of Anna’s doctors had been thoroughly diligent about her care. But neither Dan nor our ER colleague had grasped the fact that Anna’s safety didn’t rest on any individual’s performance; it depended on the interdigitated performance of the system as a whole. Asked to switch roles suddenly, they had been flummoxed by the transition.

That transition is, perhaps, the most controversial legacy of the ACGME’s mandate. The scheduling contortions are just minor nuisances. The real challenge of the 80-hour workweek is that it de-

mands a psychological transformation; it contorts the idea of residency itself. If the seamless passage of responsibility between doctors is a goal we take seriously, then we might need to do more than juggle schedules or tinker with the mechanics of communication. We may need to change the very ethos of residency — not just what residents do, but how they imagine themselves. This change isn’t going to be easy. But even William Halsted — for whom residency was a comprehensive ideology rather than a piecemeal apprenticeship — might have been sympathetic to the breadth of this approach.

(Identifying details about the patient have been changed to protect her privacy.)

From Dana Farber/Partners Cancer Care and Harvard Medical School, Boston.

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BECOMING A PHYSICIAN

Residency Regulations — Resisting Our Reflexes

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It’s Friday on the medical wards . . . and once again, I am the utterly confused ward attending.

The “bad” weekend is coming up: the pre-call resident is off today, because she is on long call on Saturday and will have to come in post-call on Sunday. She also happens to be post-short call from yesterday, and her absence today means she won’t be part of attending rounds when her new cases are presented. Her interns, on the other hand, are here today but will not come in post-call on Sunday; only the resident will come in, and she will round only on the new admissions from Saturday, not the rest of her service.

The long-call team must cease taking admissions at 6 p.m. and leave the hospital by 9:30. Night float picks up the admissions from 6 p.m., with a second shift of night float starting at midnight. Thus, there are many more night admissions handed off to the day team on short-call days, which are

beginning to resemble long-call days in heft and complexity. The short-call team that is accepting admissions today needs to present its cases to me today instead of tomorrow (in addition to the cases being presented by the resident-less team that is post-short call from yesterday), because they need to be off tomorrow because they are on long call on Sunday.

It is on these Fridays that I feel vaguely vertiginous from the regulations that govern house-staff training. It wasn’t so long ago that I trained on these wards, yet I sometimes feel a touch senescent, given my inability to assimilate these scheduling innovations.

Someone, apparently, knows what is going on, understands the reasoning behind each of these regulations, and is keeping track of them. Or at least I hope so.

In the face of such confusion, it is tempting to



Before the 80-Hour Workweek — Dr. Clement Smith and House Officers on Rounds at Children's Hospital, Boston.

Courtesy of the Archives Program of Children's Hospital, Boston.

condemn it all and pine for the “days of the giants.” Of course, there’s always a bit of accidental idealization in our memories. Every era had its sprinkling of giants, but mainly there were legions of ordinary house staff struggling to keep abreast of the clinical and logistic challenges that were thrown to them. Different eras cannot be compared, at least not in any blithely simplistic manner.

Criticism trickles down the hallways of our medical center, and the grouching rises to a fever pitch as each new set of regulations is rolled out. Some of the critiques are valid, and I hope that vociferous discussion continues to greet every new rule.

But there is also a good deal of frank whining. Changing the “gold standards” insidiously suggests that the previous gold standards — those by which we trained — were somehow flawed. This represents a not-so-subtle threat to our sense of self, and we rally our defenses.

I admit that I am not immune: It seems that no sooner had I broken through the finish line of residency than the rules were changed. Days off to compensate for weekend call? Leaving before every last patient was “tucked in”? Missing attending rounds when your cases were being presented? Blasphemy! How dare they change those bedrock rules *ex post facto*?

It feels a touch indecorous to feel this way just one generation removed from my own residency, especially when I’m sure my attendings were equal-

ly appalled at the wimpy rules of my training, but it seems that we just can’t help ourselves. It is a reflex.

Our instinctive resistance to change reflects not just nostalgia, but the fact that our years of medical training define us in an iconic fashion unique to this profession. Medical training sets social, clinical, and moral barometers by which decades of professional and personal life are gauged. These brief years imprint a personal definition in a manner not seen in other fields: one rarely hears MBAs clucking about crumbling standards and the days of the giants — most view the younger generation with unabashed envy.

But there is more to our discontent than historical mythologizing. Our present lives are affected, as we attend on the wards during these years of breathless change. Each time a new rule limits residents’ hours, someone has to fill in the gap. With the house staff already stretched thin by intricate scheduling, that someone is often the ward attending. Gone are the days when attendings graced the ward for two hours to wax academic over the handful of new admissions. Now the attendings are present all day, every day, including weekends, writing daily notes on all 35 patients. A few sense their lives sliding back to some of the woes of residency: chaotic days, long hours, sacrificed evenings and weekends.

But given that house-staff regulations and full-time attending presence are the new realities of medical training, perhaps our energy should be directed toward making this octopus of a system work. All of us who have bemoaned the lack of time for academics should be celebrating: 10 hours per day with the house staff affords abundant opportunity for teaching — it just won’t be in the strict didactic manner of our own training.

In fact, we now have a splendid chance to teach — in real time — many of the finer aspects of medicine: how we organize our thoughts in the face of overwhelming data, how we use subtler clinical skills to gain patients’ trust, how we work with nurses and administrators, how we fit in our personal lives. In sharing the burden of patient care with the house staff, in demonstrating that it is not possible, necessary, or even healthy to be superhuman, and in telling them that there is, eventually, a time to leave and go to sleep, we can show our residents that we truly care about their well-being.

All of which may well translate into better care for our patients. Although some are concerned that the increased presence of attending physicians has diluted the traditional house-staff independence,

many believe that it has lessened the cowboy mentality of the wards, with its attendant disasters. It is difficult to know which system is best for patient care, for there can be no controlled trial. But at some point in the day or the week or the call cycle, residents *must* go home, and care *must* be handed over to someone else. This is a biologic and logistic imperative.

We will continue to try different scheduling conortions to deal with the inflexible nature of the 24-hour clock; all will have drawbacks, and some will have advantages. We should be constructive — and vocal — in our critique, but we should also try to resist the subconscious urge to naysay for the sake of reinforcing our own egos. We also need to match our words with actions. If we have concerns about the changes, then we should work toward improvement, whether by lobbying for more intelligent rules, researching the effects of these regulations, or finding creative ways to ensure good clinical care

and a high level of education within the new constraints.

And so we dust off our brains and try to keep up with the scheduling roller coaster. If the pre-call resident is off, we can try to work more closely with the interns. If we detect a sliding toward cookbook medicine, we can intensify our efforts to teach critical thinking. If we sense “shift” mentality setting in, we can be glad we are in a position to model the professionalism we deem vital.

Our words of complaint will ring hollow unless our footsteps can be heard on the ground. We should resist the reflex to say that the way we did it is the way it should be done. Better to use our energy to elevate patient care and medical teaching to the highest level possible, given whatever constraints we happen to face — even on the Fridays before the bad weekends.

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Bacterial Meningitis — A View of the Past 90 Years

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Related article, page 1849

The history of community-acquired bacterial meningitis arguably represents the best example of the salutary effect of the introduction of antimicrobial agents. Before the use of specific antiserums, the outlook for patients with bacterial meningitis was dismal (see Figure). In the 1920s, 77 of 78 children at Boston Children’s Hospital who had *Haemophilus influenzae* meningitis died. The prognosis for untreated pneumococcal meningitis was equally bleak: of 300 patients, all died. In the first decade of the 20th century, untreated meningococcal meningitis was associated with a mortality rate of 75 to 80 percent.

In 1913, Simon Flexner was the first to report some success in treating bacterial meningitis with intrathecal equine meningococcal antiserum: among 1300 patients with epidemic meningitis, mortality was reduced to 31 percent.¹ Among 169 children with meningococcal meningitis treated with intrathecal antiserum at Bellevue Hospital, New York, between 1928 and 1936, the outcome was even more favorable, with mortality of about 20 percent. Fothergill reported in 1937 that treatment of *H. in-*

fluenzae meningitis with combined intravenous and intrathecal antiserums reduced mortality among 201 children to 85 percent. The prognosis for patients with pneumococcal meningitis remained extremely grave even after the introduction of specific antiserums. There were only anecdotal reports of recovery after treatment with systemic and intrathecal antipneumococcal serum.

In the 1930s, with the introduction of sulfonamides, the mortality associated with meningococcal meningitis decreased to 5 to 15 percent. By 1944, Alexander had reported that treatment with both a sulfonamide and intravenous rabbit antiserum in 87 children with *H. influenzae* type b meningitis had reduced mortality to 22 percent. In the early 1950s, chloramphenicol treatment (with sulfadiazine) reduced the fatality rate of *H. influenzae* meningitis to 5 to 10 percent and made the use of antiserum unnecessary. The results of sulfonamide treatment of pneumococcal meningitis were less favorable, with mortality ranging from 45 to 95 percent.

The use of penicillin therapy for pneumococcal