Counterpoint

‘Counterpoint’ is an occasional feature presenting discussion of a topic that is currently under debate in quality of care circles. We invite readers to submit Letters to the Editor adding their opinion to the topic.

Residents’ work hours: a wake up call?

Reduction of resident work hours seems from many perspectives a sensible idea, which is long overdue. Long hours in training, a phenomenon which is rooted in a tradition of arduous labor on the behalf of patients and a sense of professional development, appears to many observers as little more than a form of sophisticated hazing that is indeed quite dangerous. Simply put, no one would fly on a plane in which a pilot in training had been awake for 30 hours, especially if the only justification was that this is the way pilots had always been trained, or that this was the only way the pilot could learn to be a pilot. Indeed, it would appear that one of the easiest targets for the emerging safety movement must be the hours that a resident works.

There is, however, a counter-argument. If we have residents working shorter hours and spending less time in the hospital, their patients will be covered by other doctors more frequently and there will be more ‘hand-offs’ of care. Such hand-offs and discontinuity create the potential for error. Skeptics of long hours may reply that the solution to the discontinuities of shift work is not simply to make shifts longer: atomic plants require 24/7 oversight, but we do not lengthen shifts to improve safety.

Perhaps though the analogy to nuclear plants and pilots is not appropriate. The control station at the nuclear plant does not change from shift to shift, while patients’ conditions change hourly. Pilots have hours of monotonous repetitive activity, while acute patient care is rarely boring. Cross-covering doctors simply do not know the patients as well as their primary doctors do. This may mean that the trade off in length of shift/number of hand-offs ratio would be different for medicine from that of other fields.

The empirical evidence that bears on this critical ratio is surprisingly thin. First, consider the ill effects of sleep deprivation. We all know from personal experience that our cognitive function suffers when we lack sleep. Research on lack of sleep bears this out as Veesy et al.’s recent summary of more than 30 studies indicates: both short term and chronic sleep loss reduce vigilance, verbal processing, and complex problem solving abilities [1]. However, the evidence on the performance of residents during long shifts or after chronic sleep deprivation is mixed. Surprisingly, a significant number of studies show little if any cognitive deficiencies on the part of sleep deprived surgical residents, although they do show some decrement in fine motor skills [1]. On the other hand, non-surgical residents may be more prone to cognitive errors when sleep deprived. Further research is needed.

This is even more the case with regard to hand-offs. One study clearly documented an increase in preventable adverse events when patients were cross-covered [2]. Use of a computerized sign-out system largely erased this increased risk [3]. Yet there are almost no other studies that have been completed on the hand-off or cross-coverage risk.

There will likely soon be an opportunity to test the hypothesis that errors decrease when working hours are limited, as work hour regulation is on the way. In New York, it arrived in concept at least 15 years ago in the aftermath of the Libby Zion case [4]. The Bell Commission recommended, and the Department of Health adopted, regulations stipulating that residents work less than 24 hours, get at least 8 hours off between shifts, and have at least a 24 hour period off per work week. This was not enforced until a series of New York Times articles demonstrated that it was being blatantly ignored. Since that time, more vigorous oversight has led to greater compliance, and now a number of other federal and state agencies, as well as the American Medical Association, are urging adoption of similar rules [5].

But not all surgical residents are happy about the consequences of these developments. A recent survey of New York surgical housestaff revealed that most programs are now compliant with the Department of Health rules [6]. Most residents report that they are happy generally with the regulations, but senior residents in particular (79.2%), i.e. those with increased patient care responsibilities, believe there is a negative impact on surgical training. Fifty-one per cent believe that they are missing learning opportunities (such as important index OR cases), and 35% believe the regulations hurt patient care, while only 21% believe patient care is improved.

What emerges from this review of the literature is that sleepiness has negative neuropsychological effects on most people, but that as Gaba and Howard note, ‘no study has proved that fatigue on the part of health care personnel causes errors that harm patients’ [7]. There is at least some evidence that cross-coverage and more hand-offs can harm patients. Therefore, it might be prudent to do more research, perhaps through demonstration projects, and have a broader debate of the policy issues, before moving too quickly to legislate work hours [8,9].

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References


