Resident Burnout: Working Hours or Working Conditions?

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In this issue of the *Journal*, several important studies document the existence of a perpetual problem in graduate medical education—resident burnout—and emphasize the importance of developing countermeasures.[1–3] Of note, another group of notable articles exploring the consequences of the recent regulation of resident duty hours, with many showing no discernible improvement of resident burnout despite the mandated shorter work week.[4–9] In this latter group of studies, residents reported being a bit more rested than before implementation of the shorter week and that their time away from work was more enjoyable. However, task pressure at the hospital remained severe, the pace continued to be frenetic, the work load remained excessive, and frustration among residents continued to run high. Frustrations were aggravated by the widespread perception that duty hour regulations might be harmful for patient safety and resident education. What may medical educators learn from these observations about the ongoing problem of burnout?

To understand the burnout phenomenon, it is important to recognize that its roots lie in the intrinsic nature of the residency experience. The fundamental pedagogic principle of residency calls for house officers to develop independence by assuming responsibility for their patients' total care. Thus, the surgical intern, even if tired, will typically hold retractors at the operation of his patient. House officers in all specialties will transport their patients to the x-ray department for an emergent study if no one else can be found. However, from the beginning, hospitals and medical faculties typically extracted from house officers far more service than that which was actually required for learning. How easy it was, they discovered, to require the surgical intern to hold retractors during several operations each day, even if the patient was not his or her own, or to have house officers serve as the transport service for the entire facility. A tradition of the economic exploitation of house officers began as hospitals from the beginning insisted that trainees perform an extraordinary range and amount of ancillary services.[10]

These problems were highlighted in 1940 in the *Report of the Commission on Graduate Medical Education*,[11] the first report on graduate medical education (GME) in the United States. This report criticized the economic exploitation of interns and residents that was so common in American hospitals. To improve the educational value of GME, first and foremost hospitals "must work out plans to relieve the intern [and resident] from many routine procedures which he is now performing but which have relatively little educational value."[11(p59)] After the noneducational responsibilities are removed, the next step to improve GME is "by expanding its educational content."[11(p60)] According to the report, hospitals should hire salaried physicians rather than interns and residents if they cannot make adequate educational opportunities available for house officers.

Even though exhausted residents have always been regular sights in hospitals, complaints of abuse and expressions of frustration by residents seem to have been surprisingly few before World War II. Indeed, residents of this period were typically enthusiastic about their experience. This situation is typified by the late Lewis Thomas,[12] who described his internship in internal medicine at Boston City Hospital in 1937. "No job I've ever held since graduating from medical school was as rewarding as my internship," he wrote.[12(p36)] To Thomas, this description of internship represented reality, not nostalgia. "I am remembering the internship through a haze of time cluttered by all sorts of memories of other jobs, but I haven't got it wrong nor am I romanticizing the experience. It was, simply, the best of times." [12(p36)]

Research on this subject is ongoing, but several factors appear to explain the buoyancy of residents' spirits before World War II, particularly those residents who worked at major teaching hospitals.[13] Residency positions at the time (in contrast to internships, which were taken by all medical graduates) were few in number and confined to the intellectually elite. As a result, there was a deep sense of privilege, purpose, and gratitude among those who did obtain residency positions. A primary purpose of residency at this time was the preparation of the next generation of clinical teachers and investigators. Accordingly, research played a prominent role at most programs, imbuing participants with the excitement of discovery. The pace of events was slow. Patients lingered—the average length of stay was around 21 days—and the number of admissions was correspondingly lower. Thus, house officers had the opportunity to be thorough, study their patients in depth, and know their patients as human beings. This was particularly true at teaching hospitals, which intentionally limited the number of patients their house officers covered at one time. For instance, in 1939 interns at teaching

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hospitals cared for an average of 9 patients at a time, compared with an average of 25 patients at a time among interns at community hospitals.[11] The lower number of patients at teaching hospitals allowed house officers more time to read, attend conferences and rounds, and monitor their patients carefully.

Other important characteristics of residency programs at this time can also be identified. Conferences, rounds, lectures, seminars, and other formal and informal educational activities tended to be of high quality, particularly at the stronger programs. Faculty and residents knew each other well; strong professional and personal relationships with each other were commonplace. One former resident in Alfred Blalock's surgical program at Johns Hopkins recalled, "Dr. Blalock was much in contact with the resident staff and I felt his presence on a daily, if not an hourly, basis… . The Professor (as he was often referred to, but not to his face) was obviously interested in the residents as individuals, and I think each of us who completed the program felt that he knew Dr. Blalock personally."[14(pp215–217)] House officers led monastic lives—living in the hospital, receiving low pay, and rarely marrying. However, there were few complaints because everyone did this. Camaraderie among the resident staff was high, there was a strong feeling of being appreciated and part of a family, and residents talked medicine with each other throughout the day and, especially, at the "midnight meal." At most programs, there was a discernible sense that the educational returns justified the many rigors and demands.

After World War II, the stresses of residency training began to increase. The ever-growing capability and sophistication of medical practice required mastery of a host of powerful new drugs and technologies. Formerly, patients tended to live or die on their own. Now, decisions residents made—or failed to make—carried much more weight in the way of immediate life-determining consequences. Hospitalized patients became much sicker, and after the introduction of prospective payment for hospitals in 1984, the number of patients per admitting night became much greater and the length of stay much shorter. For residents in all fields, this meant busier days and nights, less time to read and sleep, and greater stress, tension, and fatigue. Year by year these pressures only grew more powerful.

In addition, many support features of residency programs began to disappear. The excitement of scientific discovery was experienced by fewer residents as research became a much less important part of the residency experience than before, particularly in the nonsurgical fields. Clinical learning became the exclusive focus; aspiring physician-scientists now obtained their academic training in doctor of philosophy programs, research fellowships, or at the National Institutes of Health. Residents began to enjoy working wages, the freedom to live outside the hospital, and the opportunity to marry. But in return, the sense they once had of belonging to a metaphorical family came to an end. In part this was because residency programs grew enormously. Post-World War II trends resulted in every medical graduate doing a residency, and American hospitals began to offer residency appointments to international medical graduates as well. The decline of community also resulted from the disappearance of faculty members from the wards. Increasingly, professors found themselves with little time to get to know residents on a personal level or to serve as bedside role models. Accordingly, few house officers spoke any longer of heroes in the profession or described their training in terms of the individuals under whom they worked. Even fewer spoke of any spiritual uplift they might have derived from the experience of being a member of the resident staff.

Finally, the perpetual tension of GME remained unresolved. Is GME an educational or service activity? Are residents students or hospital employees? As with other dualisms, the answer was "both," for confidence and independence came by assuming graded responsibility for the patient's total care. However, after World War II, as before, the amount of service actually required for learning was far less than that which hospitals typically extracted from residents. This economic exploitation did not abate, and hospitals continued to rely on trainees for an extraordinary range and amount of ancillary responsibilities.

By the 1950s, therefore, conditions were ripe for burnout among residents to become a major problem. As always, overwork and sleep deprivation did perverse things to caring individuals who entered the field of medicine to serve. But other things had happened as well. Sicker patients, together with the availability of new technologies and procedures, resulted in much more work in the daily care of patients, not to mention much more stress. The amount of nonprofessional chores did not lessen, but the sense of scholarly adventure did, as investigative opportunities were replaced by clinical chores. Relationships with attending physicians and fellow residents became more distant, and a feeling of alienation from the faculty and hospital administration became commonplace. Particularly after the introduction of prospective hospital payment, residents found themselves working up far more patients who stayed for much shorter periods of time. Corner-cutting, rather than thoroughness and attentiveness, became the key to making it through the day. The educational return for their huge investment of time, energy, and emotion was not always clear-cut. In 1965, Dr X[15] shocked the medical world with an exposé of his rotating internship at a community hospital, documenting the frustration, exhaustion, discouragement, and frequent depression that he and others experienced, inaugurating a torrent of self-conscious memoirs by overworked interns and residents that has continued unabated through the present. By the 1970s, a large amount of literature on the physical and emotional stresses of residency had appeared, which was first codified in an important but frequently

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overlooked book published by the American Medical Association.[16] The psychological problems of residency described then bear a striking resemblance to the problem of burnout today.

In this context, the problem of burnout described so eloquently in this issue of the *Journal* becomes more comprehensible. For many reasons, today's shorter work week is necessary and desirable. However, decreasing the number of work hours has not resolved, and has probably worsened, the problem of house officer stress, and it would be naïve to have expected otherwise. Residents now have more time off, but nights on call are still arduous and long, and the amount of work has increased because there are more patients to admit each call day. Few hospitals have heeded calls to provide adequate support staff for residents. As a consequence, a huge amount of nonprofessional work still falls to them.[17] The new rules do not guarantee adequate amenities while on call, a faculty that knows and cares about the house staff, stimulating conferences and rounds, the ready availability of advisors and mentors, a fair policy about parental leave, the immediate accessibility of help, or a strong sense of camaraderie. The new rules certainly do not guarantee residents enough time to evaluate and study their patients thoroughly. The regulation of working hours, in short, does not address the larger and more fundamental issue of working conditions.

Given the trajectory of GME from the beginning, this situation should hardly be a surprise. The chief problem in GME all along has been the subordination of the educational aspects of residency to institutional service needs. The lesson for today is that GME must be judged by the total experience and not by the hours of work alone. Medical educators need to pay attention to what residents do with their hours, not merely how many hours they work. It is crucial that professional leaders understand this point if GME is to be made better and if doctors and patients in the future are to be better served.

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