Reconsideration of the New York State Laws Rationalizing the Supervision and the Working Conditions of Residents

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In March 1984, Libby Zion, an 18-year-old college student, was admitted to the New York Hospital after she had been ill at home for several days with high fever and an earache. On admission, her temperature was 103.5°F with no obvious etiology and she was highly agitated. Seven hours later her axillary temperature had reached 107.8°F; she expired. Her family was distraught, especially because her death was totally unexpected and in their view inexplicable.

The District Attorney of New York County called the Fourth Grand Jury of the April/May term in 1986 into session to investigate the possibility of returning a murder indictment in the death of Libby Zion. Instead, the members of the grand jury indicted graduate medical education by ruling that,

> although there was insufficient evidence to return an indictment.... [Nevertheless, they were, concerned] that the underlying causes of the medical deficient care and treatment in this case might be prevalent in other Level One hospitals... the most serious deficiencies can be traced to the practice of permitting inexperienced physicians to staff emergency rooms and allowing interns and junior residents to practice medicine without supervision.... Under the present system, it is acceptable for seriously ill patients to be evaluated and cared for in a level one hospital emergency room by a doctor who is still in a post graduate training program and may have little or no experience dealing with patients on an emergency basis. Moreover, those patients who are admitted into these hospitals for treatment are often cared for by interns and residents who are not required to have contemporareneous, in person consultations with senior physicians before they initiate a course of treatment. As a consequence, the most seriously ill patients may be cared for by the most inexperienced physicians.... A hospital is not the place for recently graduated doctors to grow and develop in isolation; rather it is a place where the learning process should continue under strict supervision. Thus, medical decisions, whether in an emergency room or on a hospital floor should NOT be made by inexperienced interns and junior residents without in-person consultations with more senior physicians.... In addition, we recognize that the number of hours that interns and residents are required to work is counterproductive to providing quality medical care. This practice may be cost-efficient for hospital budgets, but its corresponding cost is a diminished quality of health care. To care properly for patients and to continue the learning process, physicians must be in full command of their mental faculties. It is for this reason that the Grand Jury proposes that regulations be promulgated to limit consecutive working hours for interns and residents (New York Supreme Court, 1986).

The Governor of the State of New York, Mario Cuomo, on the advice of the Health Commissioner, David Axelrod, appointed a committee of well-known physicians to study the grand jury's proposals. I chaired this gubernatorial committee, and in October of 1987 we published our final report (New York State Department of Health, 1987). This report, which was developed during 18 months of deliberation, including comments from all of the representatives of organized medicine such as the American College of Physicians, led to the enactment of "The 405 Regulations" (also known as "The Libby Zion Regulations" or "The Bell Regulations"). Our findings, as well as the grand jury recommendations, emphasized the issue of supervision, but it is the hour issue that has always been the focus of the profession and the public. The recommendations are in regard to hours that "residents shall have a work week which will not exceed an average of 80 hours per week averaged over a 4 week period and should not be scheduled for more than 24 consecutive hours with one 24 hour period of non-working time per week hours." In addition to supervision, there was a recommendation outlawing moonlighting, by making it a part of the 80 hour week, and there was a recommendation for ancillary help with additional money to be provided by the state for the implementation of these laws (New York State Department of Health, 1989).

Last spring the Accreditation Council for Graduate Medical Education (ACGME, 2002a) decided to endorse the substance of the hour regulations and make them mandatory for all residency programs. The intriguing question is why after all these years have the ACGME decided to endorse only the hour issue to say nothing

about moonlighting and, of most importance, not to even mention the primary concern of the grand jury and the committee: supervision.

According to a June 13th, 2002, *New York Times* article, the ACGME was reported to have adopted these rules to reduce the risk of dangerous errors by sleep deprived young doctors (Altman and Grady, 2002). *The New York Times* also noted that the council's action coincides with the introduction of federal legislation by Senator Jon Corizine, Democrat of New Jersey, and Representative John Conyers, Jr., Democrat of Michigan, that would also limit hours. Even before the introduction of federal legislation the Public Citizen Health Research Group, the American Students Medical Association (AMSA), the Committee of Interns and Residents (CIR), and others, petitioned the Occupational Safety and Health Administration (OSHA) to regulate the work hours of residents (Gurlaja et al., 2001). It would not be gratuitous to suggest that the ACGME was really not particularly worried about reducing error by sleep deprived residents but rather they are very interested in forestalling government interference with graduate medical education (GME). This is disingenuous and mostly self-serving palaver. After all the federal government, through the Medicare program, is deeply involved in GME. It spends about eight billion dollars per year to train residents. Most people understand that there is no free lunch in our economic system but it may be that ACGME and its constituent organizations really do believe that there is a free lunch. Nevertheless, will this attempt of the ACGME work? The answer for now in our current anti-regulatory environment is that the chance of federal regulations is slim. OSHA recently rejected the Public Citizen petition on the grounds that the ACGME should be responsible for work hour restrictions. The ACGME has had work hour restrictions ever since the New York State regulations were promulgated in 1987. Since then no institutions have lost their accreditation, with the exception of the celebrated Yale surgical program disaccredited in 2001 and provisionally reaccredited in October of 2002. I agree with a June, 15th, 2002, *New York Times* editorial that "despite the tough talk, the council faces an inherent conflict of interest. Its board is dominated by the trade associations for hospitals, doctors and medical schools, all of which benefit from the cheap labor provided by medical residents. For violations there is little reason to expect that the ACGME will be little more than an apologist for the industry"(Anonymous, 2002).

It is useful at this point to point out that while the threat of legislative and government regulations of GME is the basis of the ACGME's interest, the 118 odd teaching hospitals in New York State have about 15 years experience dealing with government regulations. How well have they complied with these government regulations and what impact have they had on residency programs?

New York State, until about 1998, did not vigorously enforce the regulations. The message could be that the state government at the time was not committed to these regulations, which were enacted by the previous administration. In 1998, the New York State Health Department performed a well-reported survey of a dozen teaching hospitals. The surveys showed gross non-compliance with the law. The surveys were reported in the New York Press and the hospitals were not happy. There on the front page of the newspapers and reiterated on the television was the story that hospitals were breaking the law and endangering the health of patients by employing chronically sleep deprived and fatigued interns and residents to care for them. The public at large knows that there are mandated continuous hour restrictions on airline pilots, truck drivers, and others, so it was a surprise to find that this did not apply to doctors as well. I can assure you that hospitals do not like this kind of publicity. But this kind of publicity is a powerful tool for making people obey the law!

In addition to media publicity there was a new wrinkle, New York State was clearly committed to a surveillance program. This year the program has been contracted to the Improvement Organization (IPRO), a federally financed Quality Improvement Organization whose stated goal in New York State is to demonstrate statistical improvement in quality indicators developed by the United States Centers for Medicare and Medicaid Services (CMS). IPRO is quite powerful, since their approval ultimately is required for Medicare reimbursement. Whether IPRO reviews of compliance with The 405 Regulations will be tied to Medicare reimbursement is not at this point evident but that possibility exists.

Compliance by program directors with the 80-hour week has steadily improved (ACGME, 2002a). As far as I can tell, there has not been any fall off in the popularity or prestige of New York City or New York State residency programs. Program directors are not known to complain to aspirants that their programs suffer because of The 405 Regulations. There are programs in New York State, which point to the 80-hour week as a benefit of training. In spite of this evidence that rationalization of work hours has not interfered with training, the promulgation of the 80-hour work week as a national standard for all residency programs by the ACGME has led to a national rehash of the dire predictions that surfaced before the New York State committee during its hearings (ACGME, 2002a). What are some of these very stale objections?

The critics say that a restricted work week will interfere with continuity of care by increasing the number of handovers (when residents leave the hospital they "handover" the care of patients to another resident). The shortened work week does increase the number of handovers, but the issue of continuity of care has little to do with the work week; it has more to do with the ante-

diluvian structure of resident education. Residency programs have hardly adjusted to the radical changes in medical science, medical technology, insurance, and the role of government in the hospital environment. Patients are hospitalized for very short stays or for intensive care, and the array of inpatient cases is narrow and hardly representative of the practice of medicine. The hospital is a poor setting for learning the natural history of disease or how to care for patients. It is also claimed that less time means there is less opportunity to get to know the patients and this will increase the number of errors, but common sense makes it evident that relatively rested residents are less apt to make errors. Residents who are not victims of sleep deprivation and chronic fatigue make for better learners and, at least as important, better spouses, parents, and care givers.

Dr. Lazar J. Greenfield, the chair of the Residency Review Committee for Surgery, said "with an 80 hour week the potential is for surgical residents to lose every third day of operative experience—the cases the residents are looking forward to after being on call the night before"(Steinbrook, 2002a). This argument has been prominent since the initial comments of the American College of surgeons at the hearings (New York State Department of Health, 1985), but since the ACGME promulgated its hour restrictions (ACGME, 2002a) and after they withdrew the accreditation of the general surgery residency at Yale (Barnard, 2002) this argument is moot. The real issue is not necessarily the number of hours or cases but whether the graduate surgical student (residents) have learned with collegial supervision how to become an independent operating surgeon.

The Grand Jury Report and the Committee's recommendation emphasized the supervision of trainees in residency programs (New York State Department of Health, 1985). As I have mentioned, these recommendations on the key role of supervising physicians and attending physicians in graduate medical education have not been supported by AMSA, CIR, or ACGME. They are not even mentioned in their various comments and reports. This may be because the supervision issue also raises what can be referred to as "The R word" and that is who is RESPONSIBLE for the care of the patient in teaching hospitals? Is the resident responsible for the consequences of the handovers, for the surgery, for the insertion of central lines, or for deciding when someone needs a ventilator? Are residents real doctors or are they graduate medical students? Who is responsible for the patient in the system of graduated responsibility?

The 405 Regulations and various regulations of the Health Care Financing Administration (HICFA) and now CMS make it clear that the responsibility for the care of the patient belongs to the attending physician. In the Libby Zion case, the attending physician never saw his patient. It is sad to note that New York State, when it reviewed the case, did not cite the attending physician but instead cited the intern and the resident, who are in reality graduate medical students. The person responsible for the care and the safety of patients are not the house staff; it is the attending physician and his clinical department who are responsible! I have yet to meet a patient or insurance company who pay residents. Patients pay their attending physicians and expect their doctors to be in charge. When a person is admitted to a teaching hospital, including a public hospital, they do not expect to be cared for by residents (i.e., graduate medical students).

It is at best dissembling not to make it plain to people that they are participating in graduate medical education. Informed consent is a hallowed concept. Is there anything wrong with giving patients admitted to teaching hospitals the option of deciding on whether they wish to be cared for by residents? I do not mean consent as a blanket statement. I mean asking patients upfront whether they would like to participate as "teachers" in GME. It is rare, in my extensive experience as a doctor and teacher to find a patient who, when asked, has refused to allow themselves to be seen and cared for by residents. If patients are asked if they would like to be "teachers" in our residency teaching program they invariably say, "Yes!" Nevertheless patients are usually not asked. Why is this the case? What is behind this deception? Patients are not told that their care, in many teaching hospitals and certainly in public hospitals, will be in the hands of residents who are poorly supervised by attending physicians at best.

A recent and highly publicized example of poor supervision is the Mount Sinai hepatectomy case (Altman, 2003). In this case, a man decided to donate a part of his liver to his brother. Mount Sinai had a pioneering service, which had shown that rather than a whole liver transplant, people with end stage liver disease could recover after hepatectomy with a partial liver transplant. The 405 Regulations are explicit in stating, "The attending physician who admits his/her private patient to the hospital has the principle obligation and responsibility at all times for the patient's care and the resident's supervision" (there are similar requirements for "service patients") (New York State Department of Health, 1987). However, despite The 405 Regulations the brother, after partial hepatectomy, was cared for, along with 36 other patients, on a post-op service at The Mount Sinai Hospital by one postgraduate year 1 (PGY-1) intern. The brother died. This death made the front page of *The New York Times*, and New York State reviewed the case and shut down the service on the grounds of inadequate supervision of house staff. Mount Sinai is one of the elite teaching hospitals in New York along with Columbia Presbyterian and New York University Hospitals. The later two had already been in trouble on similar grounds, now apparently it was Mount Sinai's turn, and in the current environment

this has been devastating. Mount Sinai, as a result of the closing of the service for close to a year, has lost over 70 million dollars and is in dire straights financially. The service was recently reopened. The newly opened service, as I understand it, is not covered by residents, which in some way is a sad response to the needs of graduate medical education.

This death, along with other egregious errors, happen and will continue to happen because of the culture of medicine. People believe that resident run services are the best for learning and for patients. During the hearings (New York State Department of Health, 1985) on the proposed 405 Regulations, a very prominent member of the internal medical establishment said before the committee, "while it is true that experience teaches senior attendings maturity that can keep residents out of trouble, the simple truth is that over time clinical skills of senior attendings...particularly the complex technological skills with which residents need the most help suffer from disuse atrophy. In consequence, a PGY-3 or a PGY-4 medical resident is therefore in many instances better equipped than a senior attending to help the intern or PGY-2 resident in trouble." If this is true, then the patient and the insurance company should know. An ancillary piece of gospel is the best way to learn is by doing it yourself. The precept is see one, do one, teach one! This precept happens without, as noted in the Grand Jury Report, "the contemporaneous, in person consultations with senior physicians before they [residents] initiate a course of treatment" (New York Supreme Court, 1986). Furthermore, students have learned a very basic cultural theme; if you do not know, you DO NOT ask! As a doctor, you are expected to know everything, if you ask your seniors or even your juniors you may run the risk of exposing the fact that you do not know. Under some circumstances you run the risk of being considered some kind of idiot, and you can even be publicly humiliated. This cultural precept is a cause of some of the egregious errors in the practice of hospital medicine. It leads to intellectual dishonesty! Everyone seems to have seen a case of everything, and people try to play the dangerous game of one-upsmanship.

The Institutes of Medicine's landmark report "To Err is Human"(Kohn et al., 1999) recognizes, the unfortunate but common problem of error in medicine publicly. It does not address the issue that medical education, like all educational systems, is based at least in part on students learning from their errors. The problem with error in medicine, unlike in other disciplines, is that when errors occur the adverse effects can be deadly. Therefore, medical educators must go to unusual lengths to develop systems, which make errors four standard deviations from normal. Yet, errors remain a cardinal feature of GME!

Error can be reduced in part by making collegial supervision, which to repeat is the core of the committee's recommendations, an inherent feature of GME. Collegial supervision is easy to accomplish and can be made an intrinsic part of the teaching experience. The supervisor must NOT act like they know it all. The supervisor must be accessible and not intimidating. The supervisor should be perfectly willing to say, "I do not know, "I do not remember, "I will look it up," or even better "Look it up for me." The computer, which is ubiquitous in most hospitals, makes it possible for us to have these facts instantly! It must be made plain to all that errors can be kept to a minimum if people (e.g., attendings, students, residents, and professors) are encouraged to and accept what is the most important precept; if you do not know or are uncertain, ASK!

People must be encouraged to expose themselves. Exposing yourself is the best way to learn! When an error occurs, while it can be terrible for the patient, it can be terrible for the physician as well. When I give talks around the country, I often ask the audience if they recall any errors that they committed, and then I ask for a show of hands - almost all raise their hands. Remember too that it helps to reduce error by being involved in a collegial situation! Besides which poor supervision, scheduled sleep deprivation, and chronic fatigue are not good for learning.

So what will happen? In a very short time people will have accepted the 80-hour work week, and they will then look to the European Union and the United Kingdom for a work week, which is even more conducive to patient care and education. By 2009, the work week for house staff in the European Union will be 48 hours. People around the country may even look to New York and see, particularly in internal medicine, that the hour restrictions have served the residents and the commonweal.

The committee report in 1987 strongly suggested that its recommendation would need a "system change." Yet, the format of residency training has not substantively changed. In our country external forces such as insurance programs, the development of hospitalists, and the government will promote change in the format of GME. Collegial supervision will become the accepted standard. In addition to these external forces the ambience of medical education is gradually changing. Students are less afraid to ask if they do not know and attendings are becoming less authoritarian and collegial. The increase in woman in medicine has made medicine much more humane and less egalitarian.

On a historical note, the 80-hour week is apparently fixed in some kind of concrete. No one has asked how that came about. Here is the story: For the past 31 years, I have been very fortunate and have rented a beach house on a dune overlooking the ocean on Cape Cod. In the summer of 1986, I was sitting on the beau-

tiful porch of that house with two friends of mine, (both Einstein graduates) Dr. Roger Platt and Dr. Shelly Jacobson. I was reviewing with them the draft of the proposed regulations. Roger, one of the most extraordinary people I know, in his very quiet way can solve everything! I was fishing with my non-mathematical mind for defining a number of work hours for resident, which might be acceptable to the establishment and provide some relief for residents. He in is his very mathematical and precise fashion thought about the week, the scheduling of internal medicine house staff, and came up with the following. There are 168 hours in a week. It is reasonable for residents to work a 10-hour day for 5 days a week. It is humane for people to work every fourth night. If you subtract the 50-hour week (10 hours/day x five days) from 168 hours, you end up with 118 hours. If you then divide 118 by 4 (every fourth night), it equals 30. If you then add 50 to 30, eureka that equals an 80-hour week! So in honor of Roger, we should redub the 80-hour work week as the "Roger Platt 80-hour work week!"

Lastly, my passionate support for transforming the culture of medicine is rooted in my belief and faith that it is a privilege and honor to be a physician.

NOTE

This manuscript was originally prepared for a "Meet The Professor" luncheon at the May 1st, 2003, meeting of The Society of General Internal Medicine in Vancouver, Canada. The luncheon was cancelled due to a delay in Dr. Bell's arrival.

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