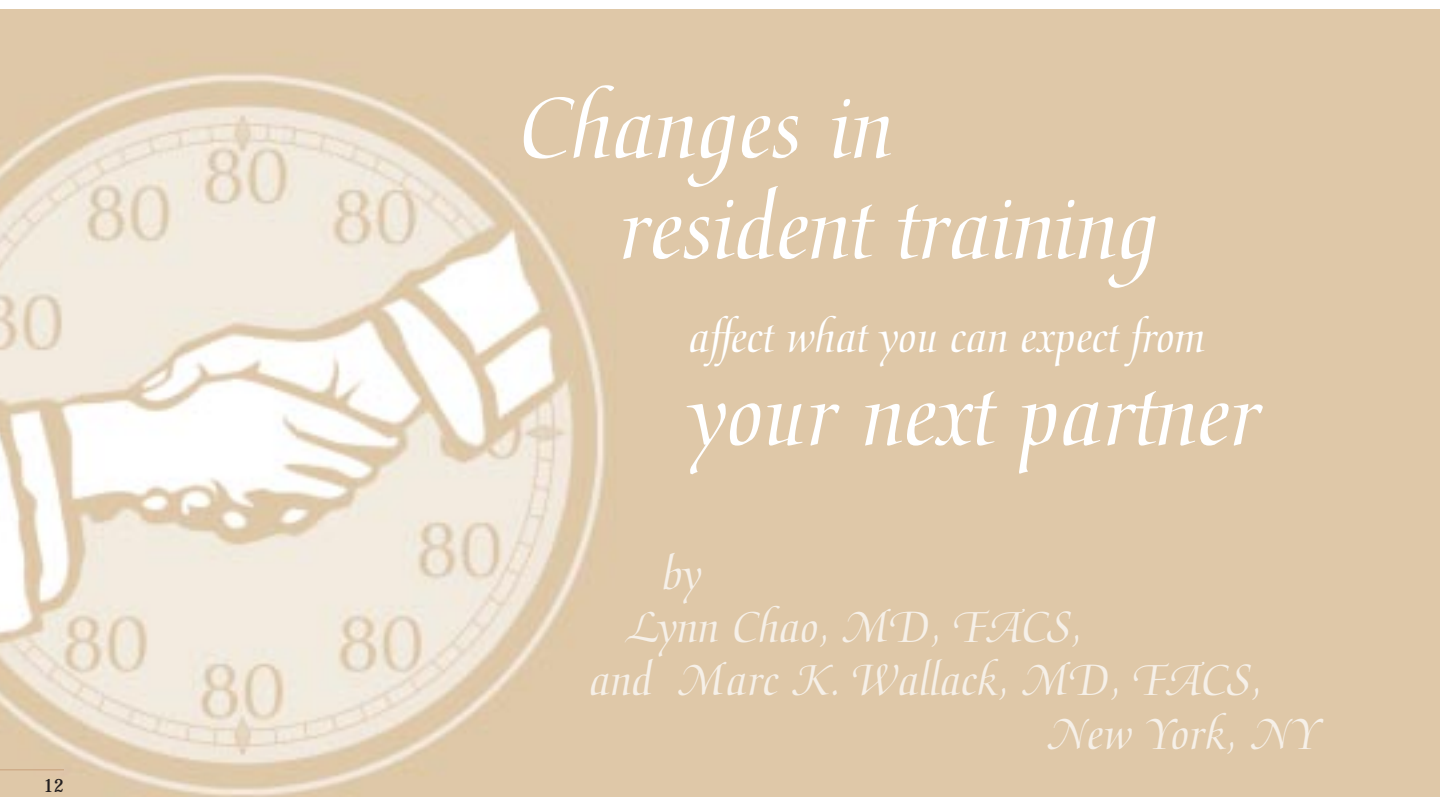

The search for a surgical partner can be a complicated and arduous process. The choice is on a par with finding a spouse, with equally serious ramifications. Questions arise as to the ability, affability, and work ethic of a new workmate. What will this person be like?

Seventy-five years ago, your next partner would have been described as male and self-sacrificing. He would have done a residency that required that he literally live at the hospital with no time for any other activities and no remuneration. He would have operated in a less-than-sterile environment with a small staff and little more than scalpels and ether with which to work.

A surgeon who was just entering practice 10 years ago would have been described slightly differently. Potential partners at this time could have been either male or female. These individuals would have been accustomed to operating in a sterile operating room with many technological resources and a large operating team at the ready. However, one adjective would have remained the same over the

years. Surgeons of 10 years ago continued to be seen as self-sacrificing. They would have gone through residencies that still offered minimal remuneration and punishing hours that left little time for family life or other interests. Through the years, these rigorous training regimes were believed to be vital in the production of competent surgeons.¹

So what will potential partners look like in this century? Everyone hopes for a partner with cool confidence, high-tech capabilities, incisive decision-making capabilities, and a slavish devotion to work. A futuristic “Star Trek”-like physician comes to mind. But, with new regulations affecting the number of hours residents may work, the image may be different than expected. The new generation of surgeons will have had limited work hours and will have been required to take less call. They will have been forced to take a day off every week and will have been permitted to sleep after long nights awake. All of these new ways of training residents will definitely affect the way surgeons approach



Changes in resident training

*affect what you can expect from
your next partner*

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their work, but in what way, no one can be sure. Hence, the question still lingers: what will my next partner be like?

Catalyst for change

Before attempting to answer that question, we should consider how and why the work-hour reforms came about. The movement toward resident work-hour reforms started with the March 5, 1984, death of Libby Zion at a New York City hospital. Her influential father, Sidney Zion, a noted New York, NY, newspaper columnist and a lawyer, questioned the decision-making abilities of an allegedly sleep-deprived and unsupervised junior resident who was involved in the treatment that Ms. Zion received. Mr. Zion pressured the Manhattan district attorney to convene a grand jury to look into criminal wrongdoing on the part of both the physicians and the hospital for allowing such conditions to exist.

In December 1986, the grand jury issued its report. While no criminal indictments were made, the grand jury did criticize resident education, especially work hours and resident supervision. These issues, particularly resident work hours, became the cause célèbre, and the politicians raised the banner.

In June 1987, the New York Department of Health was forced to form a committee to examine the issues raised in the grand jury report. Heading this panel was Bertrand Bell, MD. The committee spent June to October 1987 formulating resident work-hour reforms and addressing the other concerns raised in the report. As a result of the committee's work, on July 1, 1989, the 405 regulations, commonly known as the "Bell regulations," went into effect in New York. (See table on page 14).

Over the course of the next decade, the issue of work-hour reforms would become a national hot topic. General public awareness rose, especially in the context of medical errors. Medical student and resident groups pressed for more reforms and advocacy groups petitioned such organizations as the Occupational Health and Safety Administration. Legislation was even introduced into Congress. All of this activity eventually led the Accreditation Council on Graduate Medical Education (ACGME) to develop and implement work-hour restrictions for all resident training programs. The ACGME's rules took effect July 1, 2003, and closely resemble

the Bell Commission's standards.² The ACGME is committed to enforcing these regulations. Not even the very elite institutions are immune from enforcement. Indeed, both Yale University's surgical program and Johns Hopkins' internal medicine program have been threatened with loss of accreditation for failure to comply.

Answering the cynics

Whenever change occurs, naysayers start raising their objections. Skeptics of work-hour reform have voiced a multitude of reasons why the reforms are bad for surgical training, including the lack of continuity of care, an erosion of the work ethic, lesser quality of care, a poorer educational experience, weakened skills, and inadequate readiness for practice. These critics portray your next partner as a buffoon with Frankenstein's hands, Homer Simpson's brain, and SpongeBob Squarepants's sense of responsibility.

What these critics fail to see is that the reconfigured training programs will stress not only residents' development of clinical and scientific skills, but will treat them with the same humanity we expect them to extend to their patients. How can we expect such behavior of them if we do not set the example?

It is our contention that if surgical educators make the system more humane, more caring and well-balanced surgeons will emerge, and, ultimately, we will see improved patient outcomes and increased student interest in surgery. From the infancy of our careers, surgeons acknowledge the importance of compassion and humanity in medicine. When we graduate medical school, we take the Hippocratic Oath, proclaiming that "...warmth, sympathy and understanding may outweigh the surgeon's knife or the chemist's drug." We also acknowledge the importance of healthy spirits in our patients.

In the January 20, 2003, issue of *Time* magazine, Mehmet Oz, MD, FACS, a highly respected New York, NY, cardiac surgeon, describes a program of massage, yoga, and meditation that he has developed to help his patients manage pain and reduce anxiety.³ Leaders in other difficult fields also recognize the need for compassion and balance. Colin Powell, soon after he was promoted to Lieutenant General of the U.S. Army, assumed command of 75,000 men. In his initial address to them, he stated:

The Army is to be enjoyed, not endured. Have fun in your command. Don't always run at a breakneck pace. Take leave when you've earned it. Spend time with your families. I don't intend to work on weekends unless it's absolutely necessary. And I don't expect you to do it either. Anyone found logging Saturday or Sunday hours for himself or his troops had better have a good reason.⁴

Most surgeons know that our patients need compassion, spiritual fulfillment, and a balanced lifestyle to thrive, and we admire individuals in other fields who also recognize these needs. Yet, in our residency programs, which are certainly less grueling than training for the battlefields of Iraq, we have failed to set an example. We show little compassion, humanity, or respect for our residents' personal health and well-being. We make them work long hours, deprive them of sleep, take them away from their families and other interests, have them perform ridiculous "scut" work, and then expose them to many other stressors, such as low financial remuneration and heavy workloads. This situation can lead to burnout, depression, and ill physical health. Burnout is defined as a syndrome of emotional exhaustion, depersonalization, and a sense of low personal accomplishment. It differs from depression in that it applies only to the job, while depression affects all aspects of life. All levels of physicians, from chairpersons to interns, are susceptible. Burnt-out physicians are described as angry, irritable, and impatient.^{5,6}

For the individual resident, burnout often leads to many professional and personal problems, in-

Overview of *Bell Commission regulations*

- 80-hour scheduled work week.
- 24-hour scheduled duty.
- On-call duty not included if documented adequate rest time available.
- Non-working periods following scheduled on-duty/on-call periods.
- 24 hours of scheduled non-working time per week.
- On-site, 24 hours/day, seven days/week supervision of residents by at least PGY 4.
- Direct, in-person supervision by an attending surgeon for all surgical procedures.

cluding substance abuse, family strife, decreased job satisfaction, cynicism, and a lack of humanism, compassion, and professionalism. Academic and practicing physicians need to be concerned about this problem because it frequently translates into a poorer educational experience, less interest in surgical careers, suboptimal patient care, and decreased patient satisfaction.

A large body of literature on such topics as sleep deprivation and burnout supports these conclusions. Veasey and colleagues reviewed 50 articles regarding resident sleep deprivation, 10 of which were focused specifically on surgical residents.⁷ Overall, they found that surgical residents with acute, chronic sleep deprivation reported increased feelings of anger, confusion, and fatigue. Their motor skills deteriorated, and the number of surgical complications in their caseload increased. Furthermore, for residents in general, the rate of motor vehicle accidents increased with sleep deprivation.

Griffith and others studied the effect of intern workload on patient satisfaction and found that, among medical interns, the heavier the workload on the day of admission for a patient, the lower the overall patient satisfaction.⁸ Shanafelt looked at burnout among medical residents and found that it was quite common and was associated with self-reported suboptimal patient care.⁶ And, lest we think that practicing surgeons are immune, Campbell reported that burnout characteristics exist in up to one-third of practicing surgeons, that younger surgeons are more susceptible, and that



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one major contributory factor for surgeon burn-out is the perceived imbalance between career, family, and personal growth.⁹


The right path

Ultimately, we must ask ourselves whether we are traveling the road most likely to lead to optimal surgical care. Or, should we strive to produce surgeons who are not only technically and clinically excellent, but also more humane? We charge that we need to emphasize the latter approach for the sake of the patients and the residents themselves. And the first step toward training more caring residents is to treat them more compassionately. The implementation of work-hours regulations is not the complete answer but a part of the solution. We urge you to not approach work-hour regulations with skepticism but with optimism. No studies in New York prove that there has been a decline in the clinical and technical abilities of surgeons because of work-hour reforms. Quite the contrary; an October 2002 study at Cornell University looked at the institution's faculty and resident attitudes toward the changed work hours and at the effects on case numbers and American Board of Surgery In-Training Examination (ABSITE) scores. The study found that lifestyle and basic education had improved. It reported only the perception of a negative impact on patient care but no data to substantiate this belief. Additionally, the ABSITE scores improved, and the case numbers remained approximately the same, if not higher.¹⁰

In conclusion, we as educators must meet the following challenges:

1. Embrace the work-hour regulations as a step in the right direction toward fulfilling our duty to produce whole physicians, ones who heal with compassion and humanity.
2. Look into other ways to promote resident well-being.*
3. Study New York City residents to see whether the 405 regulations have affected them.
4. Revamp the education process for residents to fit into the ACGME regulations.
5. Use the changes to attract a broader scope of medical students.

*In an excellent article on physician well-being, Shanafelt has suggested five areas in which organizations can accomplish this goal, including the provision of adequate support services and minimal work-home interference.⁵

We must reconsider Hippocrates' charge so as to remember why we are in this profession and recall the saying, "Physician, heal thyself." We must teach our residents to embrace the definition of a physician as a skilled, compassionate healer. In this way, your next partner may not only resemble the cool portrait of the technically skilled surgeon, but also the Norman Rockwell image of a caring physician. 

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