2003

Changing the Law, Changing the Culture: Rethinking the "Sleepy Resident" Problem

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Jennifer F. Whetsell*

I. INTRODUCTION

"Residents live in the cracks of a broken health care system
. . . They get things done. But what we badly need is a system
that has many more elements of safety built into it."[1]

Teaching hospitals, medical residents (doctors-in-training), and patients have long engaged in a very rewarding three-way quid pro quo. Teaching hospitals provide valuable training to both upcoming physicians and the medical schools that teach those physicians. Residents provide inexpensive and eager services to those hospitals, their attending physicians, or senior staff, and the patients for whom they care. In residency utopia, residents and attending physicians exist in a nurturing master-apprentice relationship under which the residents' medical skills thrive, and patients receive excellent care.[2] Patients often choose teaching hospitals for their "top physicians, research and technology, and lower mortality rates in areas such as heart bypass surgery."[3]

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1.   Sandra G. Boodman, *Waking Up to the Problem of Fatigue Among Medical Interns*, L.A. TIMES, Apr. 16, 2001, at S1 (quoting David C. Leach, executive director of Accreditation Council for Graduate Medical Education).

2.   Anne Barnard, *Teaching Hospitals' Dilemma: Instruction vs. Care for Harried Residents, Duties Not Clear-Cut*, BOSTON GLOBE, Aug. 10, 2001, at B1.

3.   *Id.* It is not clear how much the quality differential between teaching and non-teaching hospitals still holds true. After World War II, academic physicians trained medical specialists and sub-specialists at record rates (exceeding the needs of teaching hospitals), and many of those specialists began working at community hospitals. Thus, "patients in the suburbs no longer necessarily need to go to teaching hospitals for specialty care; many services formerly available only at teaching hospitals can be obtained at many community hospitals as well." KENNETH M. LUDMERER, LEARNING TO HEAL: THE DEVELOPMENT OF AMERICAN MEDICAL EDUCATION 269 (1985).

Moreover, although patients are attracted to teaching hospitals for these perceived benefits, the actual medical services they receive can vary depending on, among other things, socioeconomic status. For instance, residents and interns are more likely to

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However, there is increasing evidence that this quid pro quo has been hampered by hospital traditions of long hours and little supervision for residents, including interns (medical school graduates in their first year of residency). These training programs mandate 36-hour work shifts, 100-plus hour workweeks, and frequent overnight duty.[4] These stringent standards come at the expense of patients, whose care frequently suffers under these circumstances, even to the point of injury or death.

While not all teaching hospitals engage in such exploitation tactics, enough did so as to invoke concern from many corners, not the least of which were patients. After the tragic death of a patient in 1984,[5] New York enacted a set of regulations setting work hour limitations and minimum supervision requirements for hospitals in the state.[6] And now a federal bill, modeled after the New York law, is being considered to regulate residents' work hours on a national scale.[7]

This Article explores the debate surrounding the "sleepy resident" problem. It considers the New York experience to address whether and how the federal government should take a similar approach. It analyzes the efficacy of the New York statute and demonstrates that its directives are widely flouted in hospitals across that state. The Article argues that New York's mandate fails to take sufficient account of hospital cultural and financial issues and therefore fails. A better approach would be to adopt programs that promote positive actions and cross-cultural collaboration[8] to fix problems, not initiatives that assign

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serve lower-income patients who have no attending physician, rather than wealthier ones who do. *See* WILLIAM G. ROTHSTEIN, AMERICAN MEDICAL SCHOOLS AND THE PRACTICE OF MEDICINE: A HISTORY 215-16 (1987) ("In dealing with ward patients without personal physicians, house officers have been given a great deal of discretion. This has seldom benefited the patient. Because house officers rotate among the hospital services, the residents who care for individual patients change regularly . . . Residents have been relatively unskilled providers of patient care [and] have used their patient care activities primarily for self education . . ."); *cf.* ANDREW D. HUNT, MEDICAL EDUCATION, ACCREDITATION AND THE NATION'S HEALTH: REFLECTIONS OF AN ATYPICAL DEAN 8 (1991) (noting that the poor must use local health department as affordable alternative to private practice physicians with admitting privileges).

4.   Barnard, *supra* note 2.
5.   For more discussion of the patient, Libby Zion, and the related case, *see infra* Part II.B.1.
6.   *See infra* Part III.B.1 and notes 67-69, and accompanying text.
7.   *See infra* Part III.C.3.
8.   Such collaboration, ideally, would occur internally (i.e., between senior doctors and junior doctors) and externally (between the medical community, legislators, and concerned citizens). This Article elaborates on the idea of collaborative efforts *infra* Part V.A.

blame and issue orders. The Article then sets a proposed frame-
work for a model the federal government should use to establish
a system that not only changes the law, but also the culture.

II. BACKGROUND

A. The Typical Residency and Internship Programs

The average student graduating from medical school has an
M.D. degree, and a set of basic skills sufficient to practice
medicine. Yet he or she lacks the complex and multi-faceted
skills and knowledge to practice medicine on a day-to-day basis,
much less at the specialist level.[9] This is particularly true in the
usually fast-paced atmosphere of a typical hospital, where deci-
sions must be made quickly and efficiently. As such, residents
are "physicians in transition."[10]

Clinical training officially begins during the third and fourth
years of the medical school curriculum, after students have com-
pleted two years of intensive study of basic medical science.[11]
However, many authorities question the overall efficacy of these
clinical experiences. These last two years are

> generally composed of a series of required clerkships in the
> major clinical disciplines in the third year followed by a series
> of largely elective experiences in the fourth year. In virtually
> all cases, the educational design of the clerkship and elective
> experiences consisted solely of assigning students to teams
> composed of resident physicians and an attending physi-
> cian. . . . [T]he focus of clinical education was on the care of
> seriously ill, hospitalized patients. . . . [The idea is] that stu-
> dents [can] learn what they need[ ] to know by observing resi-
> dent and attending physicians in action in inpatient settings
> and by doing whatever they were asked to do.[12]

It became apparent that, despite the overwhelming load of
course work and clinical duties assigned to the medical students,

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9. Stewart R. Reuter, *Professional Liability in Postgraduate Medical Education*, 15
J. LEGAL MED. 485 (1994).

10. *Id.*

11. Most medical schools do offer some limited clinical education in the first two
years, in the form of "longitudinal preceptorships that placed students in the offices of
primary care physicians for one half day per week" in order to expose students to
"more ambulatory care-based experiences." Michael E. Whitcomb, *Responsive Cur-
riculum Reform: Continuing Challenges*, in THE EDUCATION OF MEDICAL STUDENTS:
TEN STORIES OF CURRICULUM CHANGE (2000) (Report of Milbank Memorial Fund
& Association of American Medical Colleges), *available at* http://www.milbank.org/
aamc/0010aamc.html.

12. Reuter, *supra* note 9, at 485.

the four-year program could provide only a rudimentary medical education. With the continuing proliferation of biomedical information, a medical school education no longer sufficed, even with a jam-packed curriculum. An ever-growing amount of postgraduate instruction became necessary.[13]

Therefore, most states require at least one year of clinical training, known most commonly as a "residency," or "postgraduate education," before granting an unlimited license to practice medicine.[14] As such, the medical community frequently characterizes the first year of residency as an additional year of medical school, "in which the resident acquires additional knowledge and begins to make independent medical decisions."[15]

A typical hospital residency lasts four years, but can potentially last from three to seven years.[16] Some residencies start with one year of rotation during which the resident spends time in various specialties, such as surgery, obstetrics, and pediatrics, for a wider breadth of medical knowledge. Although the Accreditation Council for Graduate Medical Education (ACGME), a private professional organization, regulates much of the postgraduate clinical training through its accreditation

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13. Reuter, *supra* note 9, at 485. It is worth noting that this view of the medical residency's necessity to practice medicine capably is not without its critics. In fact, many scholars not only vigorously dispute the necessity of lengthy residencies, but also argue that such residency programs have negatively impacted overall medical care in the United States. *See, e.g.*, LUDMERER, *supra* note 3, at 270 "[t]here has been an ongoing tension between the need to provide students an adequate corpus of knowledge and technique and the equally important need to have students finish training at a reasonable age. In theory, one could study medicine forever; in practice, a physician at some point must enter the field. With the relentless growth of knowledge, the former has scored every major victory while the latter has suffered every corresponding defeat."

For instance, many argue that the current movement toward long residency programs has created a significant dearth of eligible doctors to practice in underserved areas of this country, particularly in rural and lower-income urban areas. *See* RAND E. ROSENBLATT ET AL., LAW AND THE AMERICAN HEALTH CARE SYSTEM 531-33, 539-41 (1997); COUNCIL ON GRADUATE MEDICAL EDUCATION, PHYSICIAN DISTRIBUTION AND HEALTH CARE CHALLENGES IN RURAL AND INNER CITY AREAS: TENTH REPORT TO CONGRESS AND THE DEPARTMENT OF HEALTH AND HUMAN SERVICES SECRETARY 1, (1998), *available at* http://www.cogme.gov/10.pdf. A number of medical schools are starting to address the problem by developing special incentive programs. *See* Howard K. Rubinowitz et al., *Critical Factors for Designing Programs to Increase the Supply and Retention of Rural Primary Care Physicians*, 286 JAMA 1041 (2001) (noting seven such U.S. medical school programs).

14. Reuter, *supra* note 9, at 485 (citing Cal. Bus. & Prof'l Code § 2065(b) (Deering 1986); Tenn. Code Ann. § 63-6-207(c)(2002); 22 Tex. Admin. Code § 163.1(a)(6) (West 2002); *see also* ROSENBLATT ET AL., *supra* note 13, at 528-29.

15. Reuter, *supra* note 9, at 485-86.

16. *Id.*

process,[17] the rotation year remains largely unregulated and its training content is left to the discretion of the teaching hospital or supervising medical school.[18] If a rotation year is not required, the resident will commence immediately in his or her selected specialty department.[19] The first year is then called the "categorical year."[20] In either case, a first-year resident is commonly called an intern.

There is no uniform model of a residency program, particularly because the various programs are run by the separate specialty departments, rather than either the medical school or the teaching hospital.[21] Generally, residents start clinical training by working mostly in patient care. From the first to third years, they increasingly allocate their time among more, non-patient care activities, such as assuming some of the teaching duties of the faculty members."[22] At the completion of the multi-year residency, the resident usually becomes certified in that particular specialty by a nationally recognized private medical specialty

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17. Accreditation Council for Graduate Medical Education, *at* http://www.acgme.org [hereinafter ACGME](describing its role and explaining the accreditation process). For a list of accredited programs, *see id. at* http://www.acgme.org/adspublic. Among the accreditation standards are guidelines for resident duty hours that vary somewhat by department, but are all considered voluntary (e.g., "Residents must not be assigned in-house call more often than every third night."). *See* Report of the ACGME Work Group on Resident Duty Hours, June 11, 2002, *at* http://www.acgme.org/new/dutyhrequirem.pdf. The ACGME, despite periodic inspections of residency programs (every one to five years), has determined that "a significant proportion of hospitals across the U.S. have failed to meet [the work hour guidelines]." ACGME Highlights Its Standards on Resident Duty Hours – May 2001, *at* http://www.acgme.org. A number of the AMA's recently adopted policies ask the ACGME to enforce compliance with these and other guidelines. *See* C. Blair Harkness, *AMA Adopts Policies Regarding Medical Education,* 283 JAMA 740 (2000) (describing papers). For more on accreditation standards, *see infra* note 26 and accompanying text.

18. Reuter, *supra* note 9, at 486.

19. The immediate commencement into specialties and sub-specialties has not escaped criticism. Until the 1960s, most students spent the last two years of medical school and the internship year in clinical training, for a total of three years. Since then, however, the elective system (which allows students to concentrate in a particular area of medicine) has converted the final year of medical school into a year of specialty training, and the internship, which exposed students to a broad range of medical departments, has been abandoned in favor of the first year of residency (normally with concentration on the specialty), leaving only the third year of medical school for clinical training in general medicine. "The effects of these changes have been so unsatisfactory that the AMA Council on Medical Education . . . recommended in 1982 that the [first year of residency] should consist of a broad year of general training." ROTHSTEIN, *supra* note 3, at 318.

20. Reuter, *supra* note 9, at 486.

21. ROTHSTEIN, *supra* note 3, at 322.

22. *Id.* at 319.

board, normally by completing a qualifying examination and meeting other specified requirements.[23] Although board certification is technically voluntary, it frequently is a de facto requirement to practice medicine in a hospital, to participate in a managed care organization (through which doctors acquire many patients), and to demonstrate qualifications to prospective patients.[24]

The ACGME accredits residency programs for a particular number of years.[25] As part of its policy, the ACGME has set forth a number of requirements for accredited teaching hospitals, including that they provide "adequate supervision for all residents, duty hour schedules that are consistent with proper patient care, systematic evaluation of the effectiveness of the teaching program, regular evaluation of residents' performance, and adequate numbers of teaching staff with appropriate qualifications to instruct and supervise the residents in the program."[26]

In the ideal residency, the postgraduate student learns how to treat patients under close supervision from an attending practitioner or medical school faculty member, while gaining "graduated, progressive responsibility" with each passing year of the residency, as required by the ACGME.[27] Meanwhile, a more senior doctor is available for consultation in cases of uncertainty.[28] In the case of interns, while senior residents often are the primary supervisors and are on call to assist with any of the interns' questions, attending physicians are also available for consultation.[29] Medical schools and teaching hospitals provide reciprocal benefits: the teaching hospitals furnish the setting for substantial medical student education and training, and medical schools in turn supply young, board-certified physicians at rela-

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23. Reuter, *supra* note 9, at 486. The qualifications differ based on the individual specialty board, but have gravitated, in recent years, toward favoring written examinations over direct observation of physicians' work or reviewing patient files. For more information on board certification, *see* the website of the American Board of Medical Specialties (ABMS), which is the umbrella organization for the twenty-four approved American medical specialty boards, *at* http://www.abms.org.

24. *See* Janice Robertson, *Tips on Board Certification and Recertification*, 282 JAMA 1882 (1999).

25. Reuter, *supra* note 9, at 487; *see* ACGME, *supra* note 17.

26. Reuter, *supra* note 9, at 486. While the ACGME provides broad residency program accreditation, separate Residency Review Committees within the ACGME establish minimum requirements for specific specialties' residency programs. *Id.* at 486-87.

27. *Id.* at 487.

28. *Id.*

29. *Id.*

tively low cost to the hospital,[30] as well as the faculty to educate and train these up-and-coming physicians.[31]

Unfortunately, since many of the nation's residency programs do not operate under this ideal system, current practice unnecessarily compromises the welfare of thousands of patients per year. These problems are discussed next.

B.   Sleepy Residents, Inadequate Supervision, and Insufficient Ancillary Staff

There are three main, interrelated problems existing in most American residency programs today. First, residents work too many hours, leading to sleep deprivation. Second, supervision is inadequate, often based on "trial by fire" type hazing. Third, ancillary staff is often inadequate.

LONG HOURS AND SLEEP DEPRIVATION. Of the three problems, the long, grueling hours of the typical residency program is probably the greatest complaint. Part of the classic residency-training program is the practice of assigning residents to overnight calls (i.e., the resident must be available to care for patients all night). Ironically, the original purpose of the overnight call was educational, because many illnesses emerged during the night.[32] This, in itself, does not represent a problem, as hospitals will always need doctors during night hours, and the original intent of scheduling doctors-in-training to the night shift (i.e., to train residents during the hours when most illnesses evolve) is legitimate. The problem is that hospitals require residents to work both the day and night shifts consecutively, without any breaks. Often, shifts last up to thirty-six hours. Indeed, the overnight on-call duty occurs several times a week for many residents, seriously disrupting their sleep patterns, as they usually are only able to sneak in a few (cumulative) hours of sleep while on call.[33]

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30.   The average salary for a resident nationwide in 2000-2001 was about $39,000. *See* The McGaw Resident and Fellow Forum, *Resident Salary Analysis*, at http:// www.mrff.org/salary (last visited Jan. 28, 2002); *see also infra* note 135 and accompanying text (listing starting resident salary).

31.   Reuter, *supra* note 9, at 488.

32.   Alice A. Kuo, *Does Sleep Deprivation Impair Cognitive and Motor Performance as Much as Alcohol Intoxication?*, 174 W. J. MED. 180 (2001).

33.   *See, e.g.*, American Medical Student Association, *Support H.R. 3236 Limiting Resident-Physician Work Hours* (2001), *at* http://www.amsa.org/hp/rwhfact.cfm [hereinafter AMSA].

Providing residents with one day off per week to recover from the draconian schedule (and the lost sleep) might ameliorate such an arrangement. But the typical resident does not enjoy this luxury. In fact, residents may work 100 hours or more per week (125 hours per week is not an atypical rite of passage),[34] with no day off for more than a month. The following schedule of a first-year internal medicine resident represents one variation on a typical week of training:

> Saturday /Sunday:Worked 36 straight hours.
> Monday: Worked from 6 A.M. to 9 P.M.
> Tuesday: Worked from 6 A.M. to midnight
> Wednesday: Worked from 6 A.M. to 3:30 A.M. the next day
> Thursday: Worked from 6 A.M. to 9 P.M.
> Friday: Worked from 6 A.M. to 7:30 P.M.[35]

Indeed, John Ronches, MD, executive director of the Committee of Interns and Residents, characterized the typical teaching hospital as one in which "people work[ ] shifts reminiscent of a 19th-Century sweat shop and completely illegal in almost all other jobs."[36]

The grueling schedule is particularly problematic because overly fatigued physicians are more likely to make mistakes:

> People fall asleep according to biological laws and have been doing so since prehistoric times – often while at work. When people try to work without adequate sleep, dangerous impairment occurs . . . Often, because [residents] have not slept, they are in a dull mental state. Yet they perform surgery and treat patients. Think of it – an auto crash victim may undergo brain surgery by a resident who has not slept for the last 60 hours.[37]

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34. Esther B. Fein, *Flouting Law, Hospitals Overwork Novice Doctors*, N.Y. TIMES, Dec. 14, 1997, at 1.

35. *Id.* Note that this schedule, in addition to tallying up to 118.5 hours, requires some consecutive day and night shifts by scheduling the resident to 36 consecutive hours on duty. Ironically, this resident worked in a Manhattan hospital, which, according to the Bell Regulations promulgated 10 years prior, was supposed to limit his schedule to 80-hour weeks, 24-hour shifts, and a day off per week. This schedule, as reported by the resident, violates the Bell Regulations in these three crucial respects. For more discussion of the Bell Regulations, and their frequent violations, see discussion *infra* Parts III.B and IV.A.

36. John Ronches, *Must We Squander the Legacy of Libby Zion?*, NEWSDAY, Jan. 3, 1995, at A24.

37. Merill M. Mitler & Mindy B. Cetel, *Why the Doctor May Fall Asleep on Your Case*, L.A. TIMES, Apr. 9, 1989, at 5.

In one 1991 study, forty-one percent of residents stated that the most serious mistake they made within the last year was due to exhaustion.[38] One of the most common causes of physician impairment is lack of sleep.[39] A study conducted by the California Board of Medical Quality Assurance reported knowledge of negative impacts on patient care, due to long work shifts, in seventy-five percent of cases.[40]

"Negative impact" is an ambiguous term. The horror stories have varied, but they all share the common trait of being horrible. Residents - even surgical residents - have reported experiences of falling asleep directly on their patients while providing medical care.[41] Other residents report that, while they do not make serious judgment errors, they "miss things" they otherwise might have noticed in a more rested state.[42] "At best, tired physicians lack the energy for thorough and compassionate care; at worst, they commit serious errors while impaired by sleep deprivation."[43] One family practitioner-in-training posed the problem well by commenting that, "It's crazy what goes on . . . . Patients would be horrified if they knew how long some of us were awake for. You just can't function properly after a while."[44]

LACK OF SUPERVISION. Compounding the sleepy resident problem are complaints about general lack of adequate supervision by attending physicians for residents. The ideal vision of the medical residency includes a close, mentor-apprentice type relationship between an attending physician and a resident.[45] However, it seems that in most residency programs the attending physician is absent from resident training. Instead, more senior residents train their junior colleagues,[46] and interns are most closely supervised by second-year residents who "are as

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38. *See* A.W. Wu et al., *Do House Officers Learn from Their Mistakes?*, 265 JAMA 2089, 2091 (1991).

39. *Id.*

40. Mitler & Cetel, *supra* note 37.

41. *Id.* at 5; *see also* Ann Japenga, *Endless Days and Sleepless Nights: Do Long Work Schedules Help or Hinder Medical Residents?*, L.A. TIMES, Mar. 6, 1988, at 1 (describing resident who fell asleep while delivering prognosis negative to patient and describing resident who, while "stitching up a patient after a Caesarean delivery pitche[d] face forward in a state of exhaustion").

42. Fein, *supra* note 34.

43. Mitler & Cetel, *supra* note 37.

44. David Abel, *Bill Eyes Guidelines*, BOSTON GLOBE, Nov. 10, 2001, at B1.

45. *See supra* note 2, and accompanying text.

46. ROTHSTEIN, *supra* note 3, at 319.

sleep-deprived and overburdened as interns and have only one additional year of experience."[47]

Many researchers have concluded that "[t]he combination of inexperience, stress, and poor supervision result in a significant number of negligent acts by house staff."[48]

The following anecdote epitomizes the typical concern about related risks to inadequate senior doctor supervision. The intern returned home after her first experience in the neonatal intensive-care unit (NICU), and related the night's events to her spouse:

> For most of the night, [the intern said] she had been the sole physician in charge of thirty-five pre-term babies attached to intravenous tubes, ventilators, and monitors. Half were under thirty weeks old . . . "Around two [a.m.], I had two babies crash on me," she said bitterly, taking a deep breath as she recalled the long night. "One was septic, and the other was turning blue. I had no idea what to do. They gave me no training, no explanations about how to run the ventilators or how to mix and adjust the intravenous fluids. If the nurses hadn't been really good, we would have lost one." "But where were the [attending physicians]?" [the intern's spouse asked] "Home." She explained that a third-year resident was theoretically on call to help her but had been gone most of the night, assigned to cover labor and delivery as well as the NICU. "You're telling me you were alone running the entire NICU – a first-year resident?" [the spouse asked the intern.] "It's their version of hell night," she said icily, "the first night on call on a new rotation, when they leave us alone, basically to sink or swim. They call it learning stress management."[49]

Many senior doctors and medical school faculty members believe that the best learning occurs by assuming responsibility.[50] However, "the proficiency of residents still in training has remained legally and professionally suspect until their competence has been demonstrated by board certification."[51] Moreover, one would think that the logic that increased responsibility would rest upon an actual correlation between the amount of supervision and the years of experience under a resident's belt.

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47.   Boodman, *supra* note 1.
48.   Reuter, *supra* note 9, at 489.
49.   David E. Duncan, *Is This Any Way to Train a Doctor? Medical Residencies: The Next Health-Care Crisis*, HARPER'S MAG., Apr. 1993, at 61.
50.   ROTHSTEIN, *supra* note 3, at 319.
51.   *Id.*

But this assumption has not borne out—consistent with the "hazing" story presented above, an Institute of Medicine study found that residents acted with supervision at the same frequency (40 percent of the time) regardless of whether the resident was in the first, second, or third year.[52] Finally, this independent responsibility may lead to errors. A 1983 study of 209 patients examined by twelve residents found errors in the examinations of about 60 percent of the patients. The researchers observed that "the errors were not minor and that their correction frequently led to major changes in differential diagnosis and therapy."[53] The issue is so critical that some experts feel it is an even larger problem, and a more potent contributing factor to medical errors than the sleep deprivation issue.[54]

ANCILLARY STAFF. A third problem involves teaching hospitals' persistent under-funding of (and in some cases, cutbacks on) non-medical ancillary staff, who provide other important tasks, such as drawing blood, delivering and retrieving ex-rays, transporting patients, and arranging patients' housing.[55] When an inadequate number of ancillary staff workers are available, their duties, which physicians commonly (though somewhat derisively) refer to as "scut work," fall to already overworked residents, who say that such important, though ancillary, duties "do not contribute to their medical training."[56] Of course, these tasks keep residents away from their primary task—treating patients. One 1993 study observed internal medicine house staff and reported that the interns and residents therein spent "[a] significant amount of time each day . . . performing non-physician duties" and in contrast spent "little time" evaluating pa-

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52. *Id.* at 275-76.

53. *Id.* at 319 (citing Nelda P. Wray & Joan A. Friedland, *Detection and Correction of House Staff Errors in Physical Diagnosis*, 249 JAMA 1035, 1037 (1983)).

54. Bertrand Bell, founder of New York's Bell Regulations, adhered to this position, and paid more emphasis to adequate supervision than to work hours in drafting the Regulations. Boodman, *supra* note 1.

55. *Id.*; Fein, *supra* note 34 (noting that problem was expected to worsen in face of more cutbacks of ancillary staff).

56. Japenga, *supra* note 41. Despite the unfortunate pejorative it suggests, the term "scut work" is widely used among practitioners, even those writing in medical journals and other scholarly papers. *See, e.g.*, Eric J. Casell, *Historical Perspective of Medical Residency Training: 50 Years of Changes*, 281 JAMA 1231 (1999); Lynne Lamberg, *Long Hours, Little Sleep: Bad Medicine for Physicians-in-Training*, 287 JAMA 303, 305 (2002); Richard Moulton, *Duty, Trust, and the Training of Residents*, 49 J. TRAUMA 575, 577 (2000). This Article's use of the term "scut work" here is designed only to adopt the name it seems to have inherited. It should be emphasized, though, that although ancillary work has taken on this term, "scut work" is a necessary element to a well-functioning hospital environment.

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tients or with patients' families.[57] Residents echo the implications of this finding. One third-year internal medicine resident, when interviewed, noted that she "could triple the number of patients she sees in a clinic setting if she had adequate ancillary help to fill out requisitions, schedule appointments, transport patients, and perform other such tasks."[58] Researchers and commentators alike have called for a reduction in residents' performance of non-physician duties.[59]

1. The Libby Zion Case

Of all the stories attributing patient safety failure to the problems inherent in American residencies, perhaps none has left a stronger legacy than the Libby Zion case. Libby Zion was an 18-year-old college freshman who arrived at the emergency room of New York Hospital at around 11:00 p.m. on March 4, 1984, with a 102 degree fever, an earache, "severe shaking, chills, and agitation."[60] She was admitted and thereafter assigned to a doctor already in charge of forty other patients. She had informed the emergency workers that she had been taking Nardil, an anti-depressant. With this information, but misunderstanding Libby's infection, an intern, halfway through a thirty-six-hour shift, prescribed an injection of Demerol, which had long been known to be fatal when taken in conjunction with Nardil.[61] Subsequently, Libby's temperature climbed to 108 degrees, yet the intern failed to return to check on Libby.[62] Indeed, no one looked at her after 3:30 a.m., and at 7:30 a.m. she died of cardiac arrest, only eight hours after having been admit-

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57. *See* Connie Parenti & Nicole Lurie, *Are Things Different in the Light of Day? A Time Study of Internal Medicine House Staff Days*, 94 Am. J. Med. 654 (1993); *see also* AMSA, *supra* note 33 ("Surveys show that between 30% and 40% of a resident's time is spent on non-educational activities").

58. Japenga, *supra* note 41.

59. Faith T. Fitzgerald, *The Case for Internal Medicine*, 328 N. Eng. J. Med. 654, 656 (1993); *See, e.g.*, Parenti & Luri, *supra* note 57, at 658.

60. Daniel Wise, *"Slow and Steady" Approach by Bensel Seen Key to Verdict*, N.Y. L.J., Feb. 8, 1995, at 1 [hereinafter Wise, *Slow and Steady*].

61. Mary McIver et al., *Staying Alert on the Intern Shift*, Maclean's, Dec. 14, 1987, at O4. Indeed, according to plaintiffs' attorney in the ensuing lawsuit, the Physician Desk Reference, considered the bible of medicine, had warned doctors for 17 years not to mix Nardil and Demerol, because otherwise they "can kill" their patients. Daniel Wise, *Lawyers Sum Up 11-Week Zion Wrongful Death Trial*, N.Y. L.J., Feb. 1, 1995, at 1 [hereinafter Wise, *Lawyers Sum Up*]; *see also* Michael D. Johnson et al., *Clinically Significant Drug Interactions*, Postgraduate Med., Feb. 1999, at 193 (noting that "this known, preventable drug interaction [between Nardil and Demerol] has been very well documented").

62. Wise, *Lawyers Sum Up*, *supra* note 61; Wise, *Slow and Steady*, *supra* note 60.

ted.[63] Her untimely death might have been no more than a foot-
note in hospital records if it had not been for her father, ex-
prosecutor and journalist Sidney Zion, who launched a crusade
to change the hospital system. Charging that his daughter's ill-
ness was misdiagnosed and mistreated due to the resident's ex-
haustion, inexperience, and lack of supervision, he filed a
medical malpractice lawsuit against four doctors and, most nota-
bly, New York Hospital, for what he deemed its medically negli-
gent residency program.[64] New York Hospital denied the
allegations,[65] and after an acrimonious trial in 1995,[66] the jury
found that the actions of two of New York Hospital's residents
caused Libby's death and held the Hospital liable. Unfortun-
ately, as the Zions' attorney explained, the jury "failed to return
with a finding of institutional negligence, a condemnation of the
system, or an award for punitive damages, all of which were im-
portant goals for the plaintiff."[67]

Despite the disappointing civil trial result, Libby's legacy ulti-
mately was grounded through legislative means. Wanting to
change the institutional practices that he believed caused his
daughter's death, Sidney Zion had also urged, and received, a

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63.   Wise, *Lawyers Sum Up, supra* note 61; Wise, *Slow and Steady, supra* note 60.
64.   Andrew Blum, *A Father's Crusade Finally Gets to Court*, NAT'L L.J., Dec. 12,
1994, at A12.
65.   *Id.*
66.   Thomas A. Moore, plaintiff's attorney, had strong language for the defendants
throughout the trial. In his opening statement, he announced that Libby's death "re-
sulted from a 'litany of errors' committed by the hospital, as well as from flaws in the
system's training, which he claimed sent out residents who were 'inexperienced, un-
supervised, overworked and sleep-deprived.'" Blum, *supra* note 64. New York Hos-
pital, having apparently discovered trace amounts of cocaine in Libby's system upon
her autopsy, responded that the cocaine use, which was not disclosed to the residents,
was the true cause, arguing that the residents would have chosen a different course of
treatment had they known of the cocaine's presence. *Id.* Plaintiffs denied any co-
caine use and accused New York Hospital of fabricating the discovery to ease itself off
the hook for its own negligence. Early sparrings included the permissible extent of
the cocaine defense, and both sides' expert witnesses endured blistering cross-exami-
nations. *Id.* In closing arguments the defense attorney admonished the jury not to
trust plaintiffs' attorney's courtroom antics and speeches. Wise, *Lawyers Sum Up,
supra* note 61.
67.   Thomas A. Moore & Matthew Gaier, *Institutional Negligence and the "Libby
Zion Rules"*, N.Y. L.J., Jan. 6, 1998, at 3. The jury accepted both plaintiff's and de-
fendants' theories, assessing the doctors and Libby 50% liability each for $750,000
worth of pain and suffering. Wise, *Slow and Steady, supra* note 60. On plaintiff's
motion, Justice Wilk set aside the jury's cocaine finding, but then granted a remittitur
to the defense, leaving the $375,000 ultimate award in place. Daniel Wise, *Judge
Rules out Cocaine Defense in Zion Opinion*, NEW YORK L.J., May 2, 1995, at 1 [here-
inafter Wise, *Judge Rules*]. The parties thereafter settled out of court for this amount.
Smaller Wins: Honorable Mention Defense Victories, NAT'L L.J., Mar. 4, 1996, at A25.

grand jury investigation into the practices and medical residency program of New York Hospital. Although the grand jury did not return a single indictment against New York Hospital or any of its physicians, it did issue a report in which it concluded that Libby's death "was due to an undiagnosed but treatable infection missed because of inadequate medical supervision and resident fatigue."[68] The grand jury noted that Libby received "woefully inadequate" care, detailed each individual doctor's mistakes, and "criticized the hospital for failing to assure adequate supervision of junior physicians."[69]

New York's response to the grand jury report in 1987 was to create an Ad Hoc Advisory Committee, chaired by Dr. Bertrand Bell, professor of Einstein Medical College, Yeshiva University. The committee designed a set of regulations that was passed as amendments to the New York State Health Code in 1989. They became known as the Bell Regulations, and their purpose was to regulate residents' work hours and supervision of their patient care.[70] These regulations are discussed in further detail later.[71]

2. Complaints from Other Patients

The Libby Zion tragedy, unsurprisingly, is not unique. A number of deaths and near-fatalities have been attributed to the errors of fatigued, inexperienced, and unsupervised residents for years. In 1999, five-and-a-half month old William Katcher, unbeknownst to the residents providing his care, was suffering from a severe infection. William was not provided a breathing tube until one of Boston's Children's Hospital's senior doctors, while on his rounds, noticed the infant struggling to breathe and came to his rescue. Taking over the care of William, senior doctors placed him in intensive care, where he was put on a respirator and eventually recovered. His mother recalled that two of the residents responsible for his care approached her, near tears, saying, "We're so sorry. We didn't know how sick he was." His mother then complained to the hospital's chief executive, who promised her that the hospital would improve supervision.[72]

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68. Mitler & Cetel, *supra* note 37.
69. Michael Orey, *Zion Update: Troubles for NY Hospital*, Am. Lawyer, April 1987, at 9.
70. Moore & Gaier, *supra* note 67; Ronches, *supra* note 36.
71. *See infra* Part III.B.
72. Barnard, *supra* note 2.

But the following year, thirteen-month-old Taylor McCormack died after residents at Children's Hospital, without advice from a senior doctor, underestimated her need for medical attention. Instead, they postponed her surgery and placed her in a non-intensive-care room. While state health officials ruled that Taylor should have been placed in the intensive care unit, it is notable that the residents could not reach the attending doctor, because he had fallen asleep with his pager on a vibrate-only setting. This occurred despite the fact that Children's Hospital has been praised as "a leader in error prevention"[73], and the fact that many Massachusetts hospitals have adopted stringent resident supervision policies.[74] The problem is not restricted to Children's Hospital by any means. A spokesperson for the Massachusetts' Department of Public Health has acknowledged the problem, citing that most, if not all, hospitals in the state have overly inadequate resident supervision.[75]

The mishaps, of course, are not restricted to pediatrics units. Another infamous case occurred in 1987, when a Nevada man was seriously injured when residents administered an injection of potassium at the proper dose, but at an incorrect rate – rapid, instead of slow. "This happened because the on-call resident was awakened briefly from a sound sleep and gave an incorrect order that to this day he cannot recall."[76]

These anecdotes represent only a few examples of mistakes where the cause, or at least a major contributing factor, was inadequate rest and/or supervision for residents treating patients, and these stories are by no means isolated.

3. Complaints from Residents

It is clear that the universe of sleep-deprivation-induced iatrogenic errors is much larger than the previous subsection suggests, when you consider that most errors are never publicly known.[77] Many residents acknowledge that the grueling work schedule and lack of supervisory and ancillary support routinely

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73. *Id.*
74. *Id.* Newton-Wellesley Hospital is a good example; it adopted one of the strictest set of supervision policies after Massachusetts cited it for the iatrogenic deaths of two mothers in 1997. *Id.*
75. *Id.* ("We have probably cited every teaching hospital in the state at one time or another over supervision of residents." (statement of Roseanne Pawelec, spokeswoman for Massachusetts Department of Public Health)).
76. Mitler & Cetel, *supra* note 37.
77. This is because mandatory reporting laws do not exist in the United States. See *infra* Part II.B.4.

affect their judgment negatively.[78] Indeed, as mentioned ear-
lier,[79] one 1991 survey found that forty-one percent of residents
cited fatigue as a cause of their most serious error, and in nearly
one-third of these incidents the patient died as a result.[80]

Not surprisingly, residents and interns live in constant fear of
adverse consequences to their patients.[81] The following near-
miss stories shared by residents are characteristic of the
problem:

> At 3 a.m., intern Michael Greger, awakened for the fifth
> time that night, listened as a nurse ticked off a long list of
> blood test results for one of his patients, then fell back into an
> exhausted stupor. Later in the morning, when he checked the
> patient's chart, Greger was horrified: He had failed to realize
> that one of the blood tests clearly showed that the man was in
> imminent danger of having a fatal arrhythmia, a heart rhythm
> disturbance. The patient was rushed into intensive care.
>
> It was 2 a.m., anesthesiology resident Steven K. Howard had
> been working for more than 16 hours and was facing another
> hectic, sleepless night in the operating room. After preparing
> two syringes containing drugs for his next patient, Howard had
> a vague feeling something was amiss. He checked the syringes
> and discovered that one contained the wrong drug, a medica-
> tion that would have triggered a fatal stroke.
>
> Plastic-surgery resident Risa S. Moriarty had been working
> for more than 50 hours without sleep when she started to per-
> form complicated colon surgery. Minutes after the nine-hour
> procedure began, Moriarty briefly nodded off, instruments in
> her hand. After her repeated attempts to stay awake failed, a
> sympathetic senior surgeon sent her home.[82]

The brutal 100-plus-hour workweeks and thirty to forty-hour
shifts negatively impact the physicians-in-training as well, both
in the short- and long-term. Stories of automobile accidents on

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78. Fein, *supra* note 34 (quoting first-year resident who commented that, because
of fatigue, "[y]ou tend to miss things. You let things fall through that cracks that can
come back to bite you" and that "[t]he way it hurts most . . . is that you end up making
decisions factoring in what's easiest for you, what won't bog you down and keep you
there longer").
79. *See supra* Part II.B.
80. *See* Wu et al., *supra* note 38, at 2089-92; *see also* Michael J. Green et al., *Do
Actions Reported by Physicians in Training Conflict with Consensus Guidelines on
Ethics?*, 156 ARC. INTERN. MED. 298, 303 (1996) (reporting survey results that re-
sidents attributed ethical errors to exhaustion and overwork).
81. *See, e.g.*, Abel, *supra* note 44 (describing a resident who "routinely works 36-
hour shifts, and worries that the lack of sleep impairs her judgment and risks the
safety of her patients").
82. Boodman, *supra* note 1.

the way home from hospital shifts are common,[83] and depres-
sion and suicidal tendencies are much higher for residents than
for other professionals in training.[84] Some students ultimately
abandoned their training for this reason, or out of fear of injur-
ing patients.[85] Others who make it through are never the same;
emotionally they are colder and less responsive toward patients
and colleagues.[86]

4.   Empirical Evidence of the Medical Mistakes and Fatigue Problem

The personal accounts described above are increasingly sup-
ported by studies on the effects of sleep deprivation, both gener-
ally and pertaining to medical residents. As a starting point, the
fact that medical errors occur is almost undeniable. The Insti-
tute of Medicine (IOM), an arm of the National Academy of
Sciences, issued a report in 1999 in which it estimated that as
many as 98,000 hospitalized patients die each year as a result of

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83.   John Ronches, *supra* note 36 (noting that every year a "New York resident
dies in a traffic accident as a result of post-work shift fatigue"); *see* Michael Hochman
et al., *Limit the Work Hours of Medical Residents*, BOSTON GLOBE, Nov. 13, 2001, at
A19 ("Emergency room residents are seven times more likely to have a motor vehicle
accident due to falling asleep at the wheel during their residency than before it.").

84.   Duncan, *supra* note 49, at 61 (discussing how "residencies had brutalized peo-
ple we knew, breaking up two marriages involving close friends, driving two others to
contemplate suicide, and leading yet another to become addicted to a narcotic that he
said got him through long nights on call" and describing how his wife, while in resi-
dency, "lost interest in food, exercise, the kids, me, and everything else she loved" and
was "becoming frustrated and disillusioned over why she had become a doctor"); *see*
Hochman et al., *supra* note 83 (noting that residents working in excess of eighty hours
per week are "at considerably increased risk for depression").

85.   Duncan, *supra* note 49, at 61 (discussing how his wife became so burned-out
from her residency that she, as well as others, took leave of absence); *see, e.g.*, Abel,
supra note 44 (describing resident who abandoned seven years of surgical resident
"after dozing off in the operating room during a 60-hour shift without sleep" and
commented that she "definitely wasn't the only one falling asleep on the job").

86.   *See, e.g.*, Abel, *supra* note 44 (describing a resident who started "resenting
patients who interrupt her late-night attempts to nap"). This strikes a sharp, and
ironic, contrast to the current trend of medical schools to include classes on ethics,
compassion, and other "humanistic" courses in the curriculum. Milo Tedstrom, a re-
tired internist and 1924 graduate of Washington University School of Medicine, com-
mented that no such classes were offered 75 years ago, but doctors instead learned
those things "while we rounded with attending [physicians] and residents." Robert
Lowes, *Labs, Lectures, and Sleepless Nights,* MED. ECON., Oct. 19, 1998, at 136. Yet
the close master-apprentice relationship has dissipated, thanks to lack of proper su-
pervision, and medical graduates are exhausted beyond capability of providing a de-
cent bedside manner. Therefore, medical schools' stated desire to "select students
who have compassion and see that they retain it," *id.* at 141, seems somewhat
disingenuous.

medical errors, with many of them preventable, and most of them unreported.[87]

Moreover, there are several interlinking reasons to believe that resident fatigue is a significant contributing factor in many of these deaths and other threats to patient safety. First, because residents and interns are given primary responsibility for most patients in teaching hospitals, they make the most errors in patient treatment.[88] Second, the effects of sleep deprivation on performance and its compromise on safety has already been demonstrated and accepted as scientific fact in many other areas, including aerospace, aviation, and transportation. Indeed,

> safety researchers, sleep experts and a growing number of influential physicians . . . point to numerous studies conducted since 1980 in transportation, at NASA, and elsewhere that clearly demonstrate that sleep deprivation causes errors. These studies consistently show that fatigue erodes every aspect of performance: judgment, vigilance, mood, motor coordination, cognitive skills, reaction time, and even the ability to recognize error.[89]

Response to these studies led to regulations, under which "airline pilots are barred from flying more than eight hours a day, truck drivers are limited to [ten] consecutive hours behind the wheel, and rest breaks are mandatory for air traffic controllers."[90]

Third, there is some documentation in the medical field that sleep deprivation in residents leads to mistakes. Studies have been consistent in demonstrating "that mood, attitude, and per-

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87. *See* Linda Kohn et al., *To Err is Human: Building a Safer Health System*, (Nov. 1999), *available at* http://stills.nap.edu/html/toerrishuman/. The report was published in book form shortly thereafter. *See* LINDA T. KOHN ET AL., TO ERR IS HUMAN: BUILDING A SAFER HEALTH SYSTEM (2000). Although the controversial report generated a lengthy debate about the accuracy of these findings, *see, e.g.,* Troyen A. Brennan, *The Institute of Medicine Report on Medical Errors – Could It Do Harm?,* 342 NEW ENG. J. MED. 1123 (2000) (challenging the classification process in calculating 98,000 "errors"), they certainly also generated a lot of commentary and public reaction, both at the state and federal legislative levels. These reactions are discussed *supra* at text accompanying note 82.

88. Typically the interns are given the most responsibility for patient care, and "are most closely supervised by second-year residents who are as sleep-deprived and overburdened as interns and have only one additional year of experience." Boodman, *supra* note 1 (quoting Bertrand M. Bell). As such, "[m]istakes by interns and residents kill more people than medication errors." *Id.*

89. *Id.*

90. *Id.*

ceived efficiency deteriorate with sleep loss."[91] Whether sleep deprivation causes cognitive deficiencies has been more vigorously debated. One authority on sleep deprivation "cited 22 studies showing that sleep deprivation leads to 'difficulty with cognition and reasoning,' as well as 'almost stereotypical emotion hazards: anger, paranoia, an inability to recognize when errors are made.'"[92] Another study found that, "[w]hen compared with their own performance[s] when rested, sleep-deprived house officers did poorly on tests of recognition of electrocardiographic patterns,[93] on tests of memory, language, numeric, and anesthesiology skills,[94] and they had more psychological problems."[95] Another study suggested that surgeons suffer from cognitive and motor skill lapses, which certainly could endanger whoever is on the table during a period of the surgeon's inadequate rest.[96] Moreover, a particularly eye-opening 2000 study found that the performance of participants with 17-19 hours of sleep deprivation was equivalent to or worse than a blood alcohol concentration (BAC) of 0.05%, and participants suffering from 19-28 hours of sleep deprivation performed at a BAC of 0.10%, suggesting significant cognitive impairment.[97] Medical researcher Alice Kuo recently cited this study as definitive evidence that sleep deprivation negatively affects residents' job

91. C.H.M. Jacques et al., *The Effects of Sleep Loss on Cognitive Performance of Resident Physicians*, 30 J. FAM. PRAC. 223 (1990) (citing C.V. Ford & D.K. Wentz, *The Internship Year: A Study of Sleep, Mood States, and Psychophysiological Parameters*, 77 S. MED. J. 1435, 1435-42 (1984); Richard C. Friedman et al., *Psychological Problems Associated with Sleep Deprivation in Interns*, 48 J. MED. EDUC. 436, 436-41 (1973); R.P. Hart et al., *Effect of Sleep Deprivation During on First-Year Residents' Response Times, Memory and Mood*, 62 J. MED. EDUC. 940, 940-42 (1987)).

92. Japenga, *supra* note 41.

93. A. Jay Block, *Revisiting the Libby Zion Case*, 105 CHEST 977 (1994) (citing Richard C. Friedman et al., *The Intern and Sleep Loss*, 285 N. ENG. J. MED. 201, 201-03 (1971)).

94. *Id.* (citing Michael R. Hawkins et al., *Sleep and Nutritional Deprivation and Performance of House Officers*, 60 J. MED. EDUC. 530, 530-35 (1985); Richard A. Denisco et al., *The Effect of Fatigue on the Performance of a Simulated Anesthetic Monitoring Task*, 3 J. CLIN. MONIT. 22, 22-24 (1987)).

95. Block, *supra* note 93 (citing Friedman et al., *supra* note 91, at 436-41).

96. *See* N. J. Taffinder et al., *Objective Assessment of the Effect of Sleep Deprivation on Surgical Psychomotor Skill*, 85 BRIT. J. SURGERY 1578, 1579 (1998) (suggesting, based on empirical study, that sleep deprivation increased stress, which in turn impaired subjects' psychomotor performance on simulated surgical tasks).

97. A.M. Williamson & Anne-Marie Feyer, *Moderate Sleep Deprivation Produces Impairments in Cognitive and Motor Performance Equivalent to Legally Prescribed Levels of Alcohol Intoxication*, 57 OCCUP. ENV'T MED. 649, 649-55 (2000). The authors also reported much slower (up to 50%) response times for 17-19 hour sleep-deprived subjects than for control subjects with a 0.05% BAC, and accuracy measures were poorer. *Id.* at 649.

performance and urged "the commitment of faculty, residency directors, and governing organizations to make a change."[98]

On the other hand, a number of studies have not found statistically significant results regarding the actual performance of sleep-deprived residents.[99] For example, a study examining the effects of sleep deprivation on surgical residents found no significant change in incidence of complications when residents were sleep deprived.[100] So, it is fair to say that the results are mixed. C.H.M. Jacques and colleagues have suggested that the lack of consistency in results "reflect the generally small numbers of residents studied, the inconsistent definition of sleep loss, and the wide variety of tests used to measure performance."[101] At the least, there is strong evidence - in addition to common sense - suggesting that a sleepy resident is an unqualified resident, and, at the very least, more research with strong empirical designs should be developed to confirm this hypothesis.[102]

Despite this, the medical community has largely dismissed the studies by exhibiting wide-scale skepticism toward their scientific basis.[103] Even the IOM report "barely mentioned fatigue as a factor in mistakes made by the nation's 100,000 interns and residents."[104] When asked why, a member of the panel that prepared the report contended that insufficient "rigorous scientific evidence" has supported a causal relationship between fatigue and medical errors.[105]

There are some legitimate roadblocks to definitively attaining that causal relationship. First of all, only about five percent of

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98.   Kuo, *supra* note 32, at 180.
99.   Jacques et al., *supra* note 91, at 223 ("Reports on measures of performance, however, have not been consistent.").
100.   *See* Richard K. Reznick & J. Roland Folse, *Effect of Sleep Deprivation on the Performance of Surgical Residents*, 154 AM. J. SURGERY 520, 520-25 (1987). However, the design study has been criticized by some because "the long work hours and every-other-night call schedule of the study groups may have resulted in evaluating two more or less equally exhausted populations." Jacques et al., *supra* note 91, at 228.
101.   Jacques et al., *supra* note 91, at 224.
102.   *See, e.g., id.* at 228 ("Better studies need to be designed specifically to separate the effects of acute and chronic sleep deprivation on performance, especially when determining the effects of sleep loss on performance in residency programs in which long hours and frequent calls are common.").
103.   Boodman, *supra* note 1 ("There have never been good studies that show damage or injury to patients that result from sleep loss by doctors. . . . You can have just as much disaster occur after having had a full night's sleep." (quoting Richard Reiling, of American College of Surgeons at the American Medical Association)).
104.   *Id.*
105.   *Id.*

medical errors are ever reported,[106] which means that 95% of medical errors are never investigated. Even within that five-percent, it is difficult to pinpoint any one cause when investigating medical errors. In fact, it has been suggested that this is partly why medicine lags behind other high-risk industries, such as aviation, in sleep deprivation research. "Medical mistakes are frequently complex and the consequences less obvious than, say, failure to de-ice an airplane."[107] As one former internist (now medical writer) commented, "It's much harder to pin a problem on the fact that a resident didn't get enough sleep . . . . It's not like when a 747 crashes and the evidence is right there on the runway."[108]

Quite possibly, the underlying reason for the lack of rigorous research may be politically motivated. Medicine may not *want* to know if sleep deprivation causes errors.[109] After all, the topic of resident fatigue is extremely sensitive. As Stephen K. Howard, associate professor of anesthesiology at Stanford University, commented, "Medicine is the only high-hazard industry that has successfully ignored this issue."[110] There are a number of reasons that the medical establishment may wish to avoid finding a smoking gun, as is discussed in the next subsection.

5.   The Medical Establishment's Defenses of the Traditional Residency

Generally, older doctors, primarily those who have "been there" and lived to tell about it, do not lend sympathetic ears to the complaints of residents.[111] There are a number of reasons why hospitals and seniors doctors defend the typical residency program. There are also some generally unspoken, yet nonetheless potent, reasons. These will all be addressed in turn.

THE CONTINUITY ARGUMENT. The traditional explanation for the long resident work hours, even thirty-six hours straight,

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106. *Id.*
107. *Id.*
108. *Id.* (quoting Timothy B. McCall).
109. *Id.* One could argue that it really is not in the self-interest of the medical establishment to prove such causation, because that would not only force a major regulatory overhaul in the American residency programs, it could subject them to medical malpractice liability for any regulatory violations.
110. Boodman, *supra* note 1.
111. Surgeons are particularly opposed to limiting residents' hours, probably because residents in the surgical disciplines tend to log the highest hours. Surgeons "led the unsuccessful opposition to the [Bell Regulations] and were instrumental in killing similar measures in Massachusetts and California." *Id.*

is the need for continuity of care in two important respects. First, mistakes are frequently made when a patient is handed off from an outgoing to an incoming doctor during shift changes because vital information about that patient slips through the cracks, and the average incoming resident is often too inexperienced to glean the information him or herself.[112] Second, senior doctors note that, pursuant to the traditional educational mission, residents learn best how to provide adequate care by following a patient from the time of admission to the time of discharge, thereby observing the patient at every critical stage of his illness or injury and learning how to treat all those aspects.[113] The absence of continuity, some have suggested, would have "an adverse effect on physician responsibility and the 'sanctity of the doctor-patient relationship.'"[114]

As to the former concern, some doctors have disputed the sincerity of this explanation. Lucian Leape, a surgeon and adjunct professor at Harvard School of Public Health, responded, "I think that's disingenuous," and noted that "[s]enior physicians can go home at 5 p.m. We have ways of making sure people don't fall between the cracks."[115] Furthermore, there is little, if any, meaningful empirical evidence to back up this theory.[116] The latter argument does offer considerable appeal. On its face, it does seem that there is educational value to be gained from following a patient case from start to finish. However, it is unclear that this age-old consideration holds up against competing issues. In other words, the educational benefits to be attained from the continuous responsibility for a patient (even that required beyond a thirty-six hour shift) inevitably wane in the face of exhaustion. Indeed, as has been noted, "[c]ommon sense as well as established principles of adult learning suggest

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112. Barnard, *supra* note 2; Hochman et al., *supra* note 83.

113. Hochman et al., *supra* note 83. A third explanation is that learning is maximized by exposure to many patients. *See* Ian R. Holzman & Scott H. Barnett, *The Bell Commission: Ethical Implications for the Training of Physicians*, 67 MOUNT SI-NAI J. MED. 136, 137 ("In a medical setting, maximizing learning requires, in a limited time, exposing our trainees to as many patients and diseases as possible. There is no question that the most skilled physicians are those who have been exposed to and cared for the widest range of patients.")

114. Block, *supra* note 93, at 977.

115. Anne Barnard, *Boston Hospitals Reassess Rising Intern Hours*, BOSTON GLOBE, June 29, 2000.

116. *See* Michael J. Green, *What (if Anything) is Wrong with Residency Overwork?*, 123 ANNALS INTERN. MED. 512, 513 (1995) (noting that "research [has not demonstrated] that long hours improve patient outcome by promoting continuity of care").

that education is optimized in a climate in which learners are physically and psychologically alert, comfortable, and rested."[117]

THE "TOUGHEN UP" ARGUMENT. Physicians ascribing to this viewpoint turn a particularly deaf ear to residents' complaints of fatigue. The entire residency system was pioneered around one hundred years ago at Johns Hopkins Medical School and Johns Hopkins Hospital.[118] It was designed like an old-fashioned fraternal system, in which

> [a] doctor was to know everything about medicine, and the entire fund of knowledge was to be learned through trial by fire. Residents were trained to fear and respect their professors and attending physicians, who in turn spent most of their time instructing and supervising, often getting to know their charges on an intensely close mentor basis.[119]

These physicians see sleep deprivation as an absolutely necessary part of training, arguing that it teaches residents to "subordinate their needs for sleep and food to the unpredictable and often consuming demands of patient care"[120] and insisting that residents do learn to transcend fatigue and function effectively, similar to an automatic pilot.[121] Others argue that the re-

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117. *Id.* Green cites a study demonstrating that very concept that improved sleep means better learning. *Id.* (citing Michael A. Wolf et al., *Improved Sleep: A Means of Reducing the Stress of Internship*, TRANSACTIONS OF THE AMERICAN CLINICAL AND CLIMATOLOGICAL ASSN., THE ONE-HUNDRED THIRD ANN. MEETING 225, 225-31 (1991)).

118. Boodman, *supra* note 1. Although Harvard, Michigan, and Pennsylvania had already implemented some clinical training into the fourth year of medical school, these endeavors were regarded as "well-intentioned anomalies." LUDMERER, *supra* note 3, at 48-57, 72. The more far-reaching structural overhaul that Johns Hopkins' medical education offered is widely credited with spurring the national movement for medical educational reform. Moreover, John Shaw Billings "designed the Johns Hopkins Hospital in addition to enunciating the educational principles on which the medical school and hospital were based." *Id.* at 58. For more on the many innovative contributions Johns Hopkins made to medical education and postgraduate training, *see id.* at 58-59, 60-63.

119. Duncan, *supra* note 49, at 61. Indeed, the residency setup has repeatedly been compared to fraternity hazing. *See, e.g.*, Japenga, *supra* note 41, at 1 (quoting a resident who describes residency as akin to "a sort of hazing that has gone on for many decades.")

120. Boodman, *supra* note 1.

121. *Id.* A letter to the editor of OB GYN News in defense of sleep-deprived residencies furthers this point, almost to a disturbing degree: "I learned to function responsibly without thinking. Any given clinical presentation elicited reflexes that were appropriate to the diagnosis and treatment of that clinical problem, regardless of my state of mind or level of fatigue . . . I can order appropriate diagnostic studies by rote . . . I have been programmed to respond appropriately and effectively thanks to those 4 grueling years of residency." Lawrence J. Lippert, *Work Now, Sleep Later*, OB GYN NEWS, June 1, 2000, at 6.

sidents' sacrifices amount to a rite of passage that "promotes group cohesion, emphasizes collegiality and bonding, solidifies social identity, and teaches humility in preparation for power social roles."[122] The sentiment essentially was summed up in a recent letter to the editor from a senior doctor, which read in part: "To those residents who demand more time off and more sleep, I say one thing: Grow up. There's a reason for every sacrifice made in our noble profession."[123]

The attitude reflects a deeper philosophy about the sort of mental and physical toughness the medical establishment believes is vital to the success of physicians-in-training, so they go to great lengths to test these residents' and interns' mettle. This culture is described in more detail:

> [T]he ability to "handle it" is a core value in medicine, which is ... a "Right Stuff" kind of environment – a culture shared by astronauts, pilots, Navy Seals and other highly trained elite groups. "Right Stuff" cultures prize exceptionally hard work, toughness, intelligence, self-sufficiency, and a refusal to complain .... "[Residents] are smart people, very competitive and driven in a high-stress environment, which requires a certain attitude to get through," [observed one physician].[124]

As such, the medical establishment sees fatigue, or the discussion of it, as a weakness.[125] But many others, including doctors, dispute this notion by pointing out the obvious: Sleep is a vital human function,[126] and "nothing can overcome the inevitable deterioration caused by sleep loss" when people are repeatedly forced to perform when their bodies are programmed to

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122. Green, *supra* note 116, at 514 (citing Leanord C. Groopman, *Medical Internship as Moral Education: An Essay on the System of Training Physicians,* 11 CULTURAL MED. PSYCHIATRY 207, 207-27 (1987)). Green notes a downside to this "self-sacrifice as virtue" theory: "[I]t may unduly promote the impression that physicians are somehow 'martyrs to virtue', which entitles them to prestige and economic privilege. This impression bolsters the belief that the profession is self-serving and may contribute to the now commonplace 'doctor-bashing.'" *Id.* (footnotes omitted).

123. Lippert, *supra* note 121, at 6.

124. Boodman, *supra* note 1.

125. *Id.* There is evidence that surgeons take this notion to an even higher degree than other medical disciplines. Richard Reiling, a former residency director who now represents the American College of Surgeons at the American Medical Association, dismisses sleep research, contending that surgeons "'are built differently' and learn to become impervious to exhaustion. 'That's part of the selection process in surgery,' added Reiling, who dismisses complaints about fatigue as 'whining.'" *Id.*

126. *See, e.g.,* Mark R. Rosekind et al., *Managing Fatigue in Operational Settings 1: Physiological Considerations and Countermeasures,* 75 HOSP. TOPICS 23, 24 (1997) ("Scientific findings have clearly established that sleep is a complex, active physiological state that is vital to human survival.").

sleep.[127] Furthermore, although heavy training can prevent a certain number of mistakes, it cannot substitute a decent night's rest in terms of clear-headedness and good judgment.[128] When judgment is impaired, the concern moves past the welfare of the average resident and rests squarely with the thousands of unsuspecting patients who fill America's teaching hospitals daily.

Still, there is a pervading sense that if older doctors made it through and survived, the younger doctors can and should do so as well. However, there are at least two important differences between the past and the present. First, the modern resident is responsible for a substantially larger amount of knowledge than the resident of fifty, or even twenty years ago.[129] As one commentator noted,

> By today's standards, medicine was primitive. There were no computerized axial tomography (CAT) scanners, intravenous arterial lines, or intensive-care units; no heart-bypass operations, bedside monitors, Swan-Ganz catheters, or artificial hips. Hundreds of diseases, diagnoses, and viruses had not yet been isolated or named; living wills, do-not-resuscitate (DNR) orders, Medicare, Medicaid, and social workers were unimagined; AIDS unknown. Physicians and patients smoked, beepers did not exist, residents numbered fewer than 10,000 (compared with more than 80,000 today), and residencies typically lasted only a year or two.[130]

Not only is the information and technology more sophisticated now, consuming more brain power than was required of doctors-in-training thirty years ago, but the patients are much more ill, and the judgment calls demanded are far less clear-cut than those decisions residents training in the 1950s had to make. Moreover, residents are forced to call these critical shots at all hours of the night.[131]

Worse, the residents are forced to make these decisions alone.[132] Unlike the apprentice-type relationship originally envisioned at Johns Hopkins 100 years ago, supervision generally

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127. Boodman, *supra* note 1; *see also* Rosekind et al., *supra* note 126, at 25 (explaining that human body's circadian rhythm programs it to sleep at night and to be awake during the day).
128. Boodman, *supra* note 1.
129. Japenga, *supra* note 41.
130. Duncan, *supra* note 49, at 61.
131. Japenga, *supra* note 41. In fact, some argue that, for these types of patients, clear thinking, compassion, and empathy are the key factors—not stamina and self-sacrifice. *See* Green, *supra* note 116, at 514.
132. Japenga, *supra* note 41.

has been lacking, with the attending physicians going home and the residents reluctant to call them out of fear of looking weak.[133] Thus, enhanced knowledge requirements and weakened supervision leave today's residents demonstrably worse off than their counterparts back in the good old days.

FINANCIAL AND LEGAL ROADBLOCKS. Although rarely, if ever, mentioned by the medical profession in defense of the residency system, financial considerations constitute a significant, and some would argue overriding, factor. As mentioned in Part II.A, one of the benefits to teaching hospitals in its reciprocal relationship with medical schools is the steady supply of medical residents willing to work for little money to complete their medical training and gain needed expertise.[134] This bonus has provided a cost-efficient incentive for hospitals to staff the departments heavily with residents, who earn an average $35,000 starting salary,[135] and to staff quite leanly with attending physicians, whose salaries typically start at $150,000.[136] Instead, those doctors are made available at their homes for consultation. However, because of the hospital culture-instilled fear of bothering attending physicians at home, they are rarely consulted.[137] On the other side of the expertise coin are the ancil-

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133. Fein, *supra* note 34. ("The senior doctors are often just not here", one resident told a New York Times reporter, "and there's a real taboo about calling them at home when there's a problem in the middle of the night. It's scary. I'm smart. I'm a good doctor. But I just don't have enough experience to be making these calls myself."). *Id.*; *see also* Barnard, *supra* note 2 (quoting a former resident who experienced a similar dilemma).

134. Ronches, *supra* note 36 ("[t]his system of residency is how we train our doctors. It's also how hospitals exploit them. Since residency is mandatory, house staff doctors form a captive work force.").

135. *See* American Medical Association, *Resident Income and Debt Relief, at* http://www.ama-assn.org/ama/pub/category/7095.html. Of course, this varies by hospital and area of the country. For instance, New York City's Catholic Medical Center offers interns $45,377, while third-year residents receive nearly $54,000. *See* SEIU Local 1991—North Broward Hospital District Union Organizing Campaign, *Gains Hospital Employees Have Negotiated for Attending Physicians & Residents. . .Working Together Works, at* http://www.voiceatwork.org/nbhd/gains/residents.html.

136. Miami's Jackson Memorial Hospital, for instance, is paying attending doctors starting salaries of $150,000 (for inpatient services), $140,000 (for satellite, ambulatory, and urgent care clinics), and $110 per hour (for ER attending doctors), plus bonuses and benefits. *See* SEIU Local 1991—North Broward Hospital District Union Organizing Campaign, *supra* note 135.

137. Boodman, *supra* note 1 ("[R]esidents are a captive population afraid to complain - or to admit they are exhausted - because their careers depend on the goodwill of their supervisors, particularly their residency directors. These senior physicians have the power to derail, or even to end, a resident's career with a bad recommendation.").

lary, or non-physician, tasks[138] many residents must complete because there is insufficient ancillary staff available to perform those services. Hiring less ancillary staff at night and adding those chores to the residents' "to do" lists saves the hospitals even more money and exacerbates the residents' sentiments that they are merely "cheap labor" cogs to be sacrificed in the big wheel of a health provider organization.[139]

In defense of the medical establishment, many teaching hospitals do not have the financial resources to implement more reasonable work schedules for residents, and cannot feasibly make the relevant changes without significant government financial assistance.[140] Even without the proposed changes in resident work hours, hospitals struggle daily to stay financially stable: "[T]he workload in hospitals has increased because of pressure to treat more patients with shorter lengths of stay in the hospital."[141] And, since many hospitals are constantly cutting costs, residents are ideal because they "are a relatively inexpensive workforce, and they are an economic benefit to the hospital and its operation."[142] In fact, the shortage of ancillary staff is directly related to budget cutting and the ability to work medical residents for long periods of time. Harry Franklin, general counsel with the Committee of Interns and Residents at Boston Medical Center, commented, "If [hospitals] can work a house staff officer 80 hours, [then] they don't need as many blood-drawing teams; they don't need as many transporters; they don't need other people because they have the house staff doing all of this work."[143] Thus, meaningful change probably will not be

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138. *See supra* note 56, explaining this term.

139. Green, *supra* note 116, at 514 (describing "cheap labor" problem). Some have disputed the notion that residents are cheap labor, pointing out that they "order more tests and procedures, are less efficient, and contribute to longer hospital stays" than do more senior doctors. *Id.* However, other studies indicate that, based on residents' actual tasks, they are "relatively cheap," and that seems to be the predominant view. *Id.*

140. Estimated implementation costs for the Bell Regulations were over $300 million for the hospitals in New York State. *See* Howard W. French, *A Limit on Doctors' Hours is Debated*, N.Y. TIMES, Apr. 5, 1989, at B3.

141. Kuo, *supra* note 32, at 180. *See also* LUDMERER, *supra* note 3, at 332 n. 47 ("With the decline in federal educational subsidies and with the public's growing concern for containing medical costs, teaching hospitals, not just medical schools, have been financially squeezed.")

142. Kuo, *supra* note 32, at 180.

143. Eva M. Panchyshyn, Comment, *Medical Resident Unionization: Collective Bargaining by Non-Employees for Better Patient Care*, 9 ALB. L.J. SCI. & TECH. 111, 113 n.12 (1998) (quoting *All Things Considered, National Public Radio*, Sept. 4, 1997, *available at* 1997 WL 12833407).

achieved without significant funding from the government. One physician recently summarized the problems: "Financial pressures, changes in the health-care industry, and growing social problems are placing our hospitals under an ever-greater burden. Without guidelines that encourage and dollars that enable hospitals to maintain adequate staff . . . our hospitals simply won't be able to care for us."[144]

Another probable reason for the lack of adequate supervision over residents has to do with common law malpractice rules regarding physician negligence. Under the "borrowed servant rule," a supervising attending physician may be held responsible for the resident's negligence if such attending physician is considered "the temporary employer of the resident." In general, "courts have determined that the general right of control that the attending physician has to direct the medical care of a patient by giving orders to hospital employees, including residents, is not adequate to make the physician a borrowing employer."[145] The reasoning is that "[r]esidents are trained professionals and should be able to perform duties commensurate with their training without direct supervision." And the converse is true:

> If, however, a member of the hospital's attending staff assumes direct supervisory control over the details of a house staff member's specific conduct, that results in patient injury, then the attending physician may be liable under the borrowed servant rule. In some states, the courts have imposed liability upon the attending physician only if the resident's negligent act occurs under the physician's *direct supervision and control*.[146]

Given the borrowed servant doctrine, many attending physicians may be reluctant to engage in a lot of supervision because this may increase their exposure to potential malpractice liability, by simply being present in the hospital room. They may prefer to allow the resident to shoulder this burden alone. As such, medical malpractice liability may affect managerial staffing decisions.

III. RESPONSES TO THE PROBLEM

A number of organizations, federal, state, and private, as well as internal hospital personnel, have responded to the problem.

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144. Ronches, *supra* note 36.
145. Reuter, *supra* note 9, at 505.
146. *Id.* at 505-06 (emphasis added).

This section will first start with a short description of the history and ethos of the patient safety movement, which was a backdrop to the Bell Regulations' enactment.

A. Background – The Patient Safety Movement

The patient safety movement, first and foremost, understands that culture is known to contribute to the occurrence of errors and accidents.[147] Therefore, it represents a steadfast commitment to safety as a top priority by developing policies that promote safety. In short, it advocates and strives toward establishing and maintaining a "safety culture." Safety culture and its related policies rest on the bedrock of four main ideas. These ideas were derived from research on the success of "high reliability organizations": high hazard organizations that, through solid leadership, have strong track records for safe, reliable performance, such as the aviation, chemical manufacturing, shipping, nuclear power production industries.[148]

The first principle acknowledges "the high risk, error-prone nature of an organization's activities."[149] Second, the movement encourages all relevant players to transcend the prevalent blame culture (i.e., a knee-jerk inclination to ensure compliance through retrospective adversive reinforcement measures),[150] and instead to create and maintain an open flow of information in order to learn about vulnerabilities to failure (i.e., reporting without punishment). Third, the movement urges organizations to contribute resources to address safety concerns, namely by adopting a systems-approach to better understand how breakdowns can occur. And fourth, it promotes partnerships across all ranks to seek solutions to vulnerabilities and stimulate sustained investments toward the common goal of utmost safety.[151]

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147. Laura T. Pizzi et al., *Promoting a Culture of Safety*, MAKING HEALTH CARE SAFER: A CRITICAL ANALYSIS OF PATIENT SAFETY PRACTICES, Agency for Healthcare Research and Quality, Pub. No. 01-E058, at 447 (2001) *at* http://www.ahrq.gov/clinic/ptsafety/pdf/ptsafety.pdf.

148. *Id.* at 450.

149. *Id.* at 448.

150. *Id.* This Article employs a definition of "blame culture" at its extreme—a culture that assigns heroes and villains and seeks to punish the villains through retrospective measures, such as fines and lawsuits. This Article does not take issue with adversive reinforcements as a general rule. Instead, it advocates that when setting policy legislatures should first explore positive reinforcement alternatives in an effort to encourage participation, and achieve consensus, among affected groups, which in turn will result in greater compliance.

151. *Id.*

In studying these high reliability organizations, researchers observed that their safety programs tended to be "behavior-based"; that is, the organizations identify at-risk behaviors exhibited by the work teams, determine which behaviors may be modifiable, and implement interventions that reduce errors (and injuries) by managing those at-risk behaviors.[152] Attitudes count as well. One study uncovered several common, cultural values in high reliability organizations: "interpersonal responsibility; person centeredness; [co-workers] helpful and supportive of one another; friendly, open sensitive personal relations; creativity; achieving goals, strong feelings of credibility; strong feelings of interpersonal trust; and resiliency."[153] Providing incentives to reward safety-promoting behavior, proceeding with a teamwork philosophy, and publicly demonstrating a commitment to safety are highly valued by the patient safety movement. In contrast, the movement has identified two particularly insidious obstacles to safety culture: "a pervasive *culture of blame* that impedes acknowledgment of error and *professional silos* that offer unique challenges to changing any universal aspect of health care, including culture."[154] Experts in culture safety urge "[a] comprehensive organizational assessment of barriers,"[155] and if such barriers do emerge, health provider organizations should "[d]evelop a summary of the findings and take highly visible steps toward meaningful improvements based on the most critical findings."[156]

B. New York Legislative Response

As was discussed earlier, in the wake of the Libby Zion case, New York appointed the Bell Committee to devise regulations to govern medical residency programs. The Committee's principle goals were "to insure that novice physicians, who give much of the front-line care in hospitals, are properly rested and not solely responsible for complex medical judgments."[157] The committee also hoped to "to turn New York's teaching hospitals into

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152. *Id.* at 450.
153. Pizzi et al., *supra* note 147, at 448 (quoting K.H. Roberts, *Cultural Characteristics of Reliability Enhancing Organizations*, 5 J. MANAGERIAL ISSUES 165 (1993)).
154. *Id.* at 451.
155. Henri Manasee, Jr., *Close to Home: Your Own Staff Can Solve Many Problems with Your Hospital's Medication System*, 75 HOSP. & HEALTH NETWORK 82 (2001).
156. *Id.*
157. Fein, *supra* note 34.

more collegial environments, in which residents could comforta-
bly seek out attending physicians as teachers."[158] Their work
laid the groundwork for the Bell Regulations, which are located
in New York's Health Code and must be followed by hospitals
where residents, interns, and medical students care for pa-
tients.[159] The principal guidelines here follow.

LIMITATION ON RESIDENT AND ATTENDING PHYSICIAN
HOURS. Under the Regulations, residents with inpatient care re-
sponsibilities are limited to an average of eighty-hour work-
weeks (calculated over four-week periods) and may not be
scheduled for shifts exceeding twenty-four consecutive hours.[160]
Emergency room residents are restricted to 12-hour shifts.[161]
"On-call" duty is exempted from the eighty-hour and twenty-
four-hour limitations only if (1) during the duty, residents are
"generally resting" and are only interrupted infrequently to care
for patients for whom the residents have "continuing responsi-
bility," (2) the duty is limited to every third night, (3) residents
get 16-hour breaks afterward, and (4) the hospital has policies
and procedures in place to immediately relieve fatigued re-
sidents.[162] The regulations also require minimum eight-hour
breaks between shifts and at least one scheduled day off per
week.[163] Furthermore, hospitals must implement policies con-
cerning "limits on the assigned responsibilities"[164] and "dual em-
ployment"[165] of residents.

RESIDENT AND INTERN SUPERVISION. The Regulations man-
date that residents and interns may provide patient care only if

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158. *Id.*
159. Moore & Gaier, *supra* note 67.
160. N.Y. COMP. CODES R. & REGS. tit. 10, § 405.4(b)(6)(ii)(a)-(b) (2001). The
Department of Health Commissioner, however, may grant exceptions for schedules
up to 15 hours on case-by-case bases based on criteria set out in § 405.4(b)(6)(i)(a)-
(c).
161. *Id.* at § 405.4(b)(6)(i). The Department of Health Commissioner, however,
may grant exceptions for schedules up to 15 hours on a case-by-case basis based on
criteria set out in § 405.4(b)(6)(i)(a)-(c).
162. *Id.* at § 405.4(b)(6)(ii)(d).
163. *Id.* at § 405.4(b)(6)(iv).
164. *Id.* at § 405.4(b)(6)(iii).
165. *Id.* at § 405.4(b)(6)(v). Some residents, due to the low pay of residency,
"moonlight" (work extra shifts) to supplement their income, greatly exacerbating the
sleepy resident problem. *See* Ashish K. Jha et al., *Fatigue, Sleepiness, and Medical
Errors,* MAKING HEALTH CARE SAFER: A CRITICAL ANALYSIS OF PATIENT SAFETY
PRACTICES 519, 520 (Kaveh Shojania et al. eds.) (2001). The idea behind this provi-
sion is that hospitals should count the moonlighting hours as part of the workweek.
See Barbara A. DeBuono & Wayne M. Osten, *The Medical Resident Workload: The
Case of New York State,* 280 JAMA 1882 (1998).

certain conditions are met. Such conditions are determined by the medical staff after review of the "licensure, education, training, physical and mental capacity and experience" of the residents and interns regarding patient care services they have provided.[166] Hospital staff also must develop written policies and procedures governing such medical practice, including guidelines setting out which situations require supervision and consultation. Moreover, medical staff must "continuously monitor[ ]" residents "to assure provision of quality patient care services."[167] In certain "acute care" specialties, a sufficient number of board-certified physicians (or those having completed at least four years of postgraduate training) must provide this supervision,[168] and the regulations spell out specific supervision requirements for surgical residencies.[169]

ANCILLARY STAFF. The Regulations also require hospitals to maintain adequate ancillary staff— IV, phlebotomy, transport, messenger, and housekeeping—at all times."[170]

ENFORCEMENT. Officially, enforcement is through citations and fines when violations are discovered. How much teeth the New York legislature intended to provide the regulations beyond this, however, is currently unclear. Thomas Moore, plaintiff's attorney in the Libby Zion case, argues that violations of the regulations leave the hospital per se liable, under medical malpractice theory, for compensatory and punitive damages to any patient injured during a time of the Regulation's violation. He (and Matthew Gaier) reasoned:

> When a patient is injured as a result of the negligence of a resident, intern or medical student, not only is the hospital vicariously liable, but it may be liable for its own negligence as well, if it failed to provide proper supervision or if it permitted an overworked physician to care for the patient. If there was a violation of any of the regulations set forth above, that viola-

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166. N.Y. COMP. CODES R. & REGS. tit. 10, § 405.4(f)(2) (2001).

167. *Id.* at § 405.4(f)(3)(ii).

168. *Id.* at § 405.4(f)(3)(iii). The enumerated specialties are "anesthesiology, family practice medicine, obstetrics, pediatrics, psychiatry, and surgery." *Id.*

169. *Id.* at § 405.4(f)(3)(iv) (requiring that: [S]upervision by attending physicians of the care provided to surgery patients by postgraduates in training must include as a minimum:

(a) personal supervision of all surgical procedures requiring general anesthesia or an operating room procedure;

(b) preoperative examination and assessment by the attending physician; and

(c) postoperative examination and assessment no less frequently than daily by the attending physician. . .)

170. *Cf.* Ronches, *supra* note 36.

tion constitutes evidence of negligence and the jury should be so instructed."[171]

This particular ambiguity notwithstanding, the Bell Regulations received, and continue to receive, wide praise from the public and popular press. The American Medical Association (AMA) and the Association of American Medical Colleges (AAMC) also endorsed them.[172] However, they were opposed by many other power medical organizations. A small handful of other states - Massachusetts, California, Pennsylvania, and Hawaii - considered adopting legislation limiting residents' hours in the late 1980s. None of the bills were successful. Two California bills were thwarted in 1987 and 1988,[173] due at least in part to the opposition from the California medical community, including the California Medical Association and the California Association of Hospitals and Health Systems. These organizations maintained, "if limits are needed, they should be set by the profession and not by legislators who don't understand the scheduling requirements of various specialty programs."[174] While this may be true, California hospitals have not made many strides out of their own volition, indicating that they do not see a problem with the work hours or are otherwise unwilling to deal seriously with the issue.[175] As of 2002, New York is the only state in the United States regulating work hours for medical residents,[176] although a number of other countries regulate, including Great

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171.   Moore & Gaier, *supra* note 67. *See* further discussion *infra* at note 239 and accompanying text.

172.   Holzman & Barnett, *supra* note 113, at 138; Block, *supra* note 93.

173.   Boodman, *supra* note 1. California State Senator Joseph B. Montoya (D-Whittier) introduced legislation (S.B. 858) in the California Senate in 1987, "but the bill died in January after passing a legislative time limit." Assembly-woman Jackier Speier (D-San Mateo) introduced legislation in 1988, but similarly, it went nowhere. Massachusetts hospitals thwarted proposed regulatory legislation by adopting voluntary guidelines instead. Barnard, *supra* note 115. Hawaii and Pennsylvania also were contemplating legislation to limit residents' work hours, but those proposed regulations did not come to pass either. Japenga, *supra* note 41.

174.   Japenga, *supra* note 41.

175.   *Id.* Such skepticism as to the existence of a problem was evident even while the California bills were still being considered. Ken Todd, then-spokesman for the California Medical Association, said, "The CMA is not in favor of legislation that would specify hours for residents or interns, but we're certainly desirous of finding a way of dealing with the problem—*if there is a problem*—of patient care." *Id.* (emphasis added.)

176.   Barnard, *supra* note 115. New Jersey may soon join New York, however. On June 20, 2002, the New Jersey State Assembly passed a bill to regulate resident work hours in a similar manner as New York. *See* New Jersey Legislature, *at* http://www.njleg.state.nj.us/bills/BillView.asp. The bill currently is pending in the state senate's Health, Human Services and Senior Citizens Committee. *Id.*

Britain,[177] New Zealand, Australia, Canada, Ireland, Denmark, Norway, Sweden, and the Netherlands.[178]

C.   The Federal Response

1.   Early Responses.

In the past few years, the federal government has taken an interest in the general issue of patient safety. Its interest was sparked in December 1999, when the IOM released a report, entitled *To Err is Human: Building a Safer Health System*,[179] which shocked the nation with its controversial finding[180] that medical errors cause up to 98,000 deaths in American hospitals annually. The report included numerous recommendations to remedy the problem. The report's estimate of deaths as a result of care "spurred politicians and leaders of healthcare organizations to action."[181] Indeed, "[t]he resulting action has been swift and strong, with organizations at national, state, and local levels debating the issue and developing new initiatives."[182] President Clinton established the Quality Interagency Coordination Task Force in 1998 to respond to the IOM report,[183] and has empowered the [f]ederal Agency for Health Research and Quality (AHRQ) to address the problem."[184]

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177.   Jesper Poulsen, *Junior Doctors and the EC Draft Directive on Working Hours: Britain Should Not Have Sought to Exempt Juniors*, 307 BRIT. MED. J. 1158. It is noteworthy, though, that, "at Britain's behest, the European Council of Ministers decided [in 1993] to exempt doctors in training from the directive on working hours." *Id.* Apparently, "Britain threatened to vote against the directive unless doctors in training were exempted." (As it was, Britain abstained from voting.) Still, the directive does apply to doctors "the moment a doctor finished his or her training," and as such, "the doctors in training grade posts who have completed their specialist training would be covered under the terms of the directive." *Id.*

178.   *Id.* In Denmark, Norway, and Sweden junior doctors work 37-45 hours a week, and in the Netherlands they are limited to 48 hours." *Id.* New Zealand's guidelines "includ[e] a maximum workweek of 72 hours, averaged over a four-week period, along with work limits of 12 consecutive hours in the emergency room and 16 hours in other departments." *Id.*

179.   Kohn, *supra* note 87, and accompanying text.

180.   *See, e.g.*, Brennan, *supra* note 87, at 1123 (challenging IOM's accuracy in calculating 98,000 "errors").

181.   Charles E. Billings & David D. Woods, Human Error in Perspective: *The Patient Safety Movement*, POSTGRADUATE MED., Jan. 1, 2001, at 14, *available at* http://postgradmed.com/issues/2001/01-01/editorial_jan.htm.

182.   *Id.*

183.   Damon Adams, *Push to Improve Patient Safety Slowgoing*, AM. MED. NEWS, MAY 7, 2001, at 1, *available at* http://www.ama-assn.org/sci-pubs/amnews/pick_01/pr120507.htm.

184.   Billings & Woods, *supra* note 181, at 14.

Meanwhile, Congress held hearings to determine the best way to address the problem. Picking up on the idea of the patient safety movement, Congress allocated $50 million dollars in 2001 to establish the national patient safety center. The AHRQ designated one of its existing programs as the national patient safety center and renamed it the Center for Quality Improvement and Patient Safety. The Center's identified purpose is to "educate patients about safety issues and conduct research on how to reduce medical errors and convert findings into improved practices."[185] The AHRQ also expects to award up to $25 million annually to establish other centers for safety research and practice and generally to support safety research and education through grants.[186] In the spirit of the safety culture, the federal government also implemented programs at the Department of Veterans Affairs, the Department of Defense, and the National Quality Forum.[187]

2. Recent (Failed) Bills.

The past few years have seen some attempts at patient safety legislation. Most notably, on June 15, 2000, both Senators Jim Jeffords (R-Vt), chair of the Health, Education, Labor, and Pensions Committee, and Edward M. Kennedy (D-Mass), the committee's ranking Democrat, presented bills calling for voluntary (but not mandatory)[188] reporting of medical errors and near misses in a national database,[189] a federal center within the AHRQ to study and help prevent medical errors, and "sweeping protections for health care practitioners and patients to ensure data produced to analyze and reduce errors is protected from discovery and not used for punishment."[190] Major safety culture themes, including inclusion and a blame-free culture, ran through the provisions. As an aide to Senator Jeffords explained, "If your goal is to catch people, then you want the thumbscrews and all the mandatory requirements. If you want

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185.   Adams, *supra* note 183, at 1.
186.   *Id.*
187.   *Id.*
188.   Linda O. Prager, *Safety Bills Take Voluntary Tack on Reporting Errors*, AM. MED. NEWS, July 3, 2000, at 6, *available at* http://www.ama-assn.org/sci-pubs/amnews/ pick_00/gvsb0703.htm. Although the IOM report called for both mandatory and voluntary reporting systems, believing that mandatory reporting is necessary for true accountability among medical professionals, politicians felt that, realistically, "such mandates would be a nonstarter for action on Capitol Hill." *Id.*
189.   Adams, *supra* note 183, at 1.
190.   Prager, *supra* note 188, at 6.

to focus on quality and create a system where you get information to improve practice, we believe a voluntary system is the way to go and will attract support."[191] However, despite support from major health care groups,[192] "[n]either proposal reached a vote."[193]

3.   The Current Bill.

A new bill, entitled the Patient and Physician Safety and Protection Act of 2001,[194] introduced in November 2001 by United States Representative John Conyers (D-Mich.) and sponsored by twelve other Democratic congressman, proposed to set strict national limits on the number of resident work hours.[195] Modeled after the Bell Regulations,[196] the proposed legislation limits resident work hours to eighty per week, limits residents' shift lengths to twenty-four consecutive hours, and guarantees one day off per week and one full weekend off per month.[197] The bill's proposed enforcement methods, however, seem to include more teeth than did the Bell Regulations. They require annual anonymous surveys to residents to determine compliance,[198] on-site inspections (based on survey results),[199] and provide a pool of money for hospitals to comply with the provisions.[200] Alternatively, residents may file grievances with the Secretary of Health and Human Services to report such violations,[201] with the protection of a whistleblower provision.[202] Hospitals violating the law would be subject to stiff fines up to $100,000.[203]

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191. *Id.*
192. *Id.* ("Five groups—including the American College of Physicians—American Society of Internal Medicine and the American Hospital Assn.—already have signed on to the Jeffords bill, applauding its voluntary, non-punitive approach.")
193. Adams, *supra* note 183, at 1.
194. H.R. 3236, 107th Cong. (2001). Under this proposal, the new provisions would amend § 1866 of the Social Security Act, 42 U.S.C. § 1395cc. H.R. 3236, 107th Cong. § 3(a) (2001).
195. Abel, *supra* note 44.
196. *See* John Conyers, *The Patient and Physician Safety and Protection Act of 2001*, *at* http://www.house.gov/conyers/news-patientsafetyprtectionact.htm.
197. Abel, *supra* note 44.
198. Patient and Physician Safety and Protection Act of 2001, H.R. 3236, 107th Cong. § 3(b)(4)(A) (2001).
199. *Id.* at § 3(b)(4)(B).
200. *Id.* at § 4.
201. *Id.* at § 3(b)(2).
202. *Id.* at § 3(c).
203. *Id.* at § 3 (b)(3).

Senior doctors and medical institutions have, thus far, been critical of federal guidelines, arguing that they "look at the symptoms of the problem rather than the roots of the problem," and that "[f]ocusing on duty hours neglects looking at supervision, the content of the program, and resources of the program. It's really the institutions who must take responsibility."[204]

But the bill's supporters, including the American Medical Student Association,[205] counter that hospitals have not taken responsibility, thereby leaving the door open to federal regulation to ensure the patient safety that the medical establishment has been accused of neglecting.[206] As of April 15, 2002, the bill is still in committee.[207] More recently, Senator Jon Corzine (D-NJ) introduced a parallel bill in the Senate on June 12, 2002, which is also currently in committee.[208]

IV. RETHINKING THE REGULATORY ROUTE: LESSONS FROM NEW YORK

There are a number of important considerations Congress should weigh before enacting these regulations. This does not mean that Congress should not implement any legislation, but there is a legislative tendency to see one problem and try to attack it with very issue-specific legislation for a quick fix. New York's experience sheds significant light on important roadblocks to the effectiveness of legislative regulations, a discussion of which follows.

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204. Abel, *supra* note 44.

205. Accreditation Council for Graduate Medical Education, *ACGME Highlights it Standards on Resident Duty Hours* (2001) *at* http://www.acgme.org. Actually, AMSA, along with Public Citizen and the Committee of Interns and Residents (CIR), filed a petition with the Occupational Safety and Health Administration (OSHA) on April 30, 2001 urging adoption of federal regulations that limit resident work hours. *Id.* The implication is that federal action either at the regulatory or statutory level would be satisfactory for AMSA's members.

206. *See* AMSA, *supra* note 33.

207. Specifically, on November 6, 2001 the bill was referred to the House Subcommittee on Health. *See* 2001 Bill Tracking H.R. 3236; 107 Bill Tracking H.R. 3236, *at* LEXIS-NEXIS Congressional Universe-Document, http://web.lexis-nexis.com/congcomp.

208. Patient and Physician Safety and Protection Act of 2002, S. 2614, 107th Cong. (2002). After its introduction, the bill was referred to the Committee on Finance, where it currently remains. *See* 2002 Bill Tracking S.2614, 107 Bill Tracking S. 2614, *at* LEXIS-NEXIS Congressional Universe-Document, http://web.lexis-nexis.com/congcomp.

A. Efficacy of the New York Statute – Noncompliance

By far, the biggest problem with the Bell Regulations is the lack of compliance with its directives. Indeed, they are being widely ignored.[209] New York's DOH acknowledged in 1995 compliance among hospitals in the city has been irregular and is getting worse. In 1989, DOH investigators found that sixty-two percent of the hospitals it surveyed were out of compliance in at least one department. That noncompliance rate was seventy-one percent in 1990-91, and ninety-two percent in 1994.[210]

Time did not heal the noncompliance issue. Former New York City Public Advocate Mark Green issued a report in late 1997 announcing that trainees routinely work more than the legally permitted hours per week and often without the requisite monitoring of diagnoses and treatments by senior doctors.[211] Green's report further determined that some violations "either directly resulted in or were a factor in harm to patients."[212] And in March 1998, "[a] series of raids conducted by [New York's DOH] at prestigious teaching hospitals . . . found numerous violations, including the case of one resident who worked a staggering 136-hour week."[213]

In response to the report, the New York Times conducted dozens of interviews with residents who confirmed the findings.[214] Residents also observed that other teaching hospitals, while appearing to be compliant, managed to circumnavigate the regulations through other means. Typically, the hospital will not post a schedule officially listing residents as working in ex-

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209. Moore & Gaier, *supra* note 67 (*citing* Fein, *supra* note 34).
210. Ronches, *supra* note 36.
211. Fein, *supra* note 34.
212. *Id.* One patient was administered the wrong drug because of "inadequate resident supervision"; another patient suffered respiratory arrest after having a breathing tube removed prematurely by a resident who "was not effectively supervised." *Id.* And yet another patient entered the hospital with a hand problem, was never seen by an attending surgeon, and ultimately died from sepsis. *Id.* New York State Department of Health Commissioner Barbara DeBuono also acknowledged that noncompliance was "not uncommon" and that some violations led to injury and death. *Id.*
213. Boodman, *supra* note 1. The DOH reported that "37% of all residents worked more than 85 hours per week, 20% of all residents and 60% of surgical residents worked more than 95 hours per week, and 38% of all residents and 67% of all surgical residents worked more than 24 consecutive hours." Jha et al., *supra* note 165, at 520.
214. Fein, *supra* note 34. Residents reported working, on average, 95 to 110 hours per week, which, while better than the pre-Bell Regulations 125 hours per week, still violates the regulations. *Id.*

cess of the statutory maximum. Instead, "separate schedules were drawn up for clinic and in-patient duties, and the two lists were not reconciled."[215] Other times, senior doctors used tacit understandings: "[A]lthough a schedule may list [residents], for example, as working [a twelve-hour shift], it was made clear to them that they should actually arrive an hour or two before the starting time and that they were expected to stay late, too."[216] Moreover, "technically optional" conferences, at which "attendance is taken and expected," are not included in the work schedule, despite the Bell Regulations' proscription.[217]

Green's report also found ancillary staffing to be severely inadequate, despite the $55 million the state gives to hospitals annually to help them comply with those regulations. Green's staffers also observed that residents were still engaging in much non-physician work because of the problem. And, while the state gives hospitals $55 million a year to help them comply with the ancillary staff regulations, "very few hospitals can account for how they spend that money," which angers state officials.[218]

One could argue that getting implementation off the ground takes several years, after which the effects become more noticeable. Yet twelve years later, many hospitals still violate the rules. Therefore, the problem seems to transcend financial considerations. No matter how much money New York pumps into the project, it may not be enough to conquer the underlying problems.

B.   Reasons for Noncompliance

Financial Considerations—Hospital Compliance Costs. Hospitals argue that hiring the necessary physicians and ancillary staff, as well as making miscellaneous administrative changes to accommodate the new regulations, is prohibitively expensive. On the other hand, the state gave New York City hospitals a significant amount of annual funding to comply with the regulations, and the DOH has not required, nor have hospitals offered, an accounting of the money. The implication is that the hospitals eagerly accept the money but use the funds on other things, and not for its intended purpose.[219]

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215. *Id.*
216. *Id.*
217. *Id.*
218. Ronches, *supra* note 36.
219. *See id.* (advocating for, at minimum, an accounting of the monies provided to determine on what improvements it was spent and how much more might be needed).

No matter who is right and who is wrong, hospitals probably entertain a legitimate concern over compliance costs. The federal government should be committed at the outset to the idea of getting hospitals to comply by providing extra dollars to those hospitals to get them up to code. Otherwise, we will see the same old story: hospitals in rich areas complying, and hospitals in poor areas not complying, both because the population in poor areas is less powerful in enforcing the requirements (thereby effectively negating the real incentive for hospitals to comply), and because the hospitals in poorer areas simply lack the financial means to implement the changes.

Organizational Considerations—Lack of Administrative Commitment. The Bell Regulations, over the years, have suffered from a number of monitoring deficiencies.[220] First, critics note that there was insufficient funding to enforce the strictures.[221] This problem was exacerbated by New York's city and state governments' budget cuts of their enforcement agencies, steadily eroding the Department of Health's ability to monitor and enforce the guidelines. Indeed, "[t]he Giuliani administration and the Health and Hospitals Corporation have targeted the public health-care system's already decimated central offices for almost complete elimination, while the DOH accreditation staff (one of the finest monitoring staffs in this country) has been similarly ravaged." Therefore, while the DOH was able to visit thirty New York City hospitals in 1989, the number of visits dropped to twelve in 1993, and have been on the decline ever since.[222] Not only was the risk of getting caught low, the penalties for violation were not steep – only $2,000 per violation.[223]

The state legislature more recently has attempted to turn the tide on this administrative erosion. In early 2000, the state legislature earmarked $168 million of a $2.9 billion dollar health budget "for a crackdown on hospitals that force medical residents to work past the point of exhaustion."[224] The new provision also provides the DOH with funds for annual staffing audits and increases the maximum fine amount to $50,000 for a repeat violation.[225] Although some have praised these new efforts,[226] it

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220. *Id.*
221. *Id.*
222. *Id.*
223. Susan Rubinowitz, *Hosp. Docs No Longer the Young and the Rest-less*, N.Y. POST, Jan. 26, 2000, at 18.
224. *Id.*
225. *Id.*

remains to be seen what the actual effect these changes will have on residency programs and, ultimately, on medical errors. At the very least, New York's experience shows that meaningful change requires a great deal of continuous government support in terms of money and attention.

"Conscientious" Objectors. Some doctors had vowed not to honor the regulations from the beginning, purportedly believing in their hearts that the changes would lead to detrimental effects on patients, including lost information from the discontinuity in care provided to those patients.[227] This view was bolstered by one post-Bell Regulations study published in 1993, finding that patients were now more likely to suffer from complications and delays in the performance of diagnostic tests and extended hospital stays.[228] But critics counter that the study is "bogus" because it was conducted at a single hospital only three months after the Regulations' passage, failing to allow adequate time for adjustments.[229] Meanwhile, another study developed a scheduling model designed to reduce sleep deprivation and improve continuity, and demonstrated decreases in lab test ordering and length of hospital stays.[230]

It is also interesting that the federal bill declines to set supervisory standards for residents or require certain amounts of ancillary staff, but rather limits its strictures to resident work hours. Ironically, of the three areas, the work hours are what healthcare provider institutions object to most voraciously; they still adhere to the master-apprentice model and thus favor the notion of adequate supervision, at least in theory, if not in practice.

Cultural Considerations. Despite the best of intentions, the Bell Regulations largely failed to take into account that hospi-

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226.   *Id.* (quoting Bertrand Bell, founder of the Bell Regulations, as calling new measures "a win-win situation").

227.   Sarah Boseley, *Doctors "Cannot Admit Mistakes,"* GUARDIAN, Mar. 17, 2000, *available at* 2000 WL 17213925.

228.   Christine Laine et al., *The Impact of a Regulation Restricting Medical House Staff Working Hours on the Quality of Patient Care,* 269 JAMA 374, 377 (1993) (concluding that "[c]ontinuity may be important and better care may be provided by a tired physician who is familiar with the patient than by a rested physician who is less familiar with the patient").

229.   *See, e.g.,* Laura Buterbaugh, *Limiting Residents' Hours: Study Finds Unexpected Rise in Test Delays and Complications (New York Hospital, New York),* MED. WORLD NEWS, Feb. 1, 1993, at 56, *available at* 1993 WL 12241110.

230.   Daniel J. Gottlieb et al., *Effect of a Change in House Staff Work Schedule on Resource Utilization and Patient Care,* 151 ARCHIVES OF INTERNAL MED. 2065, 2065 (1991).

tals "are most supportive of steep hierarchies in which junior staff do not question senior staff." As such, physicians exercise a great deal of control over healthcare delivery and they simply do not want to be told what to do, particularly in the absence of what they deem solid empirical findings that contradict their healthcare philosophy.

There is great reluctance to abide by government standards for two additional reasons. First, hospitals traditionally set their own standards, or theoretically follow the guidelines set by the accrediting organization and are generally suspicious of federal or state interference. The concern here is that "regulations may be crafted by legislators who lack intimate knowledge of the health care system" and fail to understand the heterogeneity within America's health care system.[231] Second, such regulations put in place yet another blame system, which violates the very idea of the patient safety movement. Aside from the possible citations and monetary penalties for failure to comply, an overwhelming fear of malpractice liability makes hospitals very defensive. After all, it is possible that courts in the future could hold hospitals responsible for compensatory and punitive damages for mistakes made while not in compliance with regulations.[232] Thus, although the Bell Committee sought to change that culture,[233] it did not take adequate account of which cultural factors can easily be changed simply by enacting a set of regulations, and which cannot.

There is no reason why the federal government must follow in this same path. A better approach would be to carefully assess hospital culture, determine which facets are instrumental and which ones must be altered, and work within these boundaries to eventually change the boundaries. Working within such a model, and simply announcing to a hospital, "Thou shall not overwork interns," will not suffice. This does not mean that Congress should accept all hospital culture. For instance, some of the more egregious examples of hazing and hell nights, argua-

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231.   Robert Trowbridge & Robert M. Wachter, *Legislation, Accreditation, and Market-Driven and Other Approaches to Improving Patient Safety*, in MAKING HEALTH CARE SAFER: A CRITICAL ANALYSIS OF PATIENT SAFETY PRACTICES, Agency for Healthcare Research and Quality, Pub. No. 01-E058, at 602 (2001) *at* http://www.ahrq.gov/clinci/ptsafety/pdf/ptsafety.pdf.

232.   *See infra* notes 171 and 239, and accompanying text.

233.   Fein, *supra* note 34 ("'We wanted these laws *to change the culture*,' said Dr. [Bertrand] Bell [founder of New York's Bell Regulations]. . .*They didn't*.") (emphasis added).

bly putting hospital patients at a significantly higher risk, are not acceptable. Those aspects of the culture must be changed.

However, other parts are not only deeply entrenched but serve useful purposes not overshadowed by grave risks to patients. In particular, the virtues associated with the patient safety movement are good examples after which legislation should be modeled, particularly since most hospitals and medical organizations clearly are on board. Moreover, the federal government has implemented structures under its ideals in the past.[234] The better approach would take the virtues identified in the patient safety movement and implement a system that adheres to them (i.e., work with hospitals, not against them).

Conclusion. Given the experience of New York State, the federal government would have an uphill battle in implementing and enforcing the regulations as the bill currently stands, particularly given financial and cultural considerations. Congress would have to be committed financially to the venture by providing hospitals with significant sums of money to bring their residency programs up to code. Thereafter, Congress would have to be committed to an administrative organization (presumably under HHS's Medicare umbrella), providing it with sufficient means to inspect hospitals regularly and to enforce the regulations as they discover violations. Although the proposed bill currently guarantees sufficient funds to bring hospitals up to code,[235] budget cuts regarding healthcare regimes are not unknown at the federal level. It is not clear that Congress is ready to make these sorts of commitments, nor is it clear that Congress should make these commitments in the absence of a meaningful consideration of both hospital culture and safety culture. By taking into consideration the hospitals' problems, philosophies, and needs, Congress can create a broader-based strategy that would be more widely supported within the medical community and thus be more effective toward the goal of optimal patient safety.

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234. *See supra* note 187, and accompanying text.
235. *See* Patient and Physician Safety and Protection Act of 2001, H.R. 3236, 107th Cong. § 4 (2001).

V.   A Proposed Alternative for Congress

A.   What Congress' Strategy Should Take into Account

The New York experience has demonstrated that, if nothing else, compliance is dependent upon a commitment to address structural, financial, and most importantly, cultural roadblocks. Therefore, the federal law should likewise attack all of these elements.

1.   Safety Culture Considerations

At the same time that we assess the validity of various hospital culture ideals, we should be ready to decide whether we are willing to integrate safety culture into the plan. As discussed earlier, the patient safety movement operates under four main principles: (1) acknowledgment of risky activity, (2) rejection of emphasis on blame to improve flow of communications, (3) adoption of systems approach to determine etiology behind breakdowns, and (4) cross-rank and cross-cultural partnerships to seek solutions that enhance safety.[236] Additionally, the safety programs tend to be behavior-based and team-oriented. If the federal goal is to encourage hospitals to aim toward their goals, then the federal strategy should be consistent with these goals as well.

2.   Hospital Culture Considerations

As discussed earlier, we must evaluate past traditions and current values, and make conscious decisions about which should stay and which must go. We must examine each tradition and value, determine which ones are fundamental, and figure out a way to show doctors that certain traditions are outdated and should be abandoned for the common good of residents, patients, hospitals, and the medical profession in general (i.e., to stay professional and to foster a happy environment and better learning opportunities). We must work within and, in some cases, transform the culture, depending on what is outdated and what is not. There are many examples, and a few that were discussed in this Article are given below.

Science & Skepticism About Empirical Evidence. As was discussed earlier in this Article, one of the reasons senior doctors and hospital administration have not been more sympathetic to residents' complaints about long hours and poor supervision is

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236.   *See supra* notes 149-151, and accompanying text.

because they are skeptical of the accuracy of the assertions. Instead, they counter, with little or no supporting evidence, that continuity of care is sacrificed if laws force hospitals to move to the other end of the spectrum. It is not helpful to counter doctors' skepticism over the accuracy of the empirical evidence on sleep deprivation by retorting, "But isn't it obvious?" Instead, we should end the debate now with a scientifically-based empirical study conducted by government-selected and American Hospital Association (AHA) or American Medical Association (AMA) selected doctors to determine the answer.[237] If the study shows definitively that sleep-deprived residents do in fact make bad doctors, we can proceed with limits. Once we get the doctors on board with each aspect of the game plan (i.e., that certain changes are necessary and will benefit the hospital in the long run), they will be more eager to participate.[238]

"Sink or swim" attitude. Many physicians take a superhuman view of the average physician-resident, believing they can overcome enormous backlogs of sleep deprivation, and that what does not kill the resident will make him or her stronger. This deeply-entrenched attitude will be the hardest to combat, but changing this attitude is key to the success of residency reform. Perhaps a proper empirical study showing the detriment to patients will provide the much-needed change in attitude. Or, perhaps other compromises will be necessary.

Malpractice liability. A major roadblock to more active physician participation on this topic is the fear that if real evidence emerges demonstrating the ill effects of long resident work hours and lack of attending supervision, hospitals will be exposed to even more malpractice liability. This liability will give lawyers more impetus to file lawsuits against hospitals no matter how earnestly they try to comply with the regulations. Such a sentiment on the part of physicians is not totally unfounded. Thomas A. Moore, plaintiff's attorney in the Libby Zion lawsuit, recently argued that New York courts have a legal basis for assessing compensatory and punitive damages against hospitals if

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237. The benefit of an integrated research team is that any further objections to the study's methodology can be preempted by assembling, at the outset, a research design upon which all can agree. This lack of agreement has thwarted the probative value of earlier research attempts. *See supra* Part II.B.4.

238. This proposed study is addressed again, *infra*, at Part V.B.

a patient is injured by a resident subject to a work schedule that violates the Bell Regulations.[239]

Although the legal posture Moore and Gaier adopt has the advantage of allowing some aggrieved patients (who choose the often lengthy and punishing path of tort litigation)[240] more access to legal redress, there are two issues Congress (and any state legislators) should keep in mind when considering the proposal. First, the proposal does not address the wider issue of the patient safety movement, which is determining how to improve the delivery of medical services and thereby preventing (or reducing) iatrogenic errors. The IOM, in releasing its 1999 report, emphasized that its purpose was "how to make systems safer, . . . not on 'getting rid of bad apples,' or individuals with patterns of poor performance."[241] Expanded malpractice liability, while not wholly incompatible with endeavors to improve patient safety, also does not do much to advance the cause. Second, talk of increased malpractice liability will not bring doctors to the table to discuss this sensitive topic. This does not mean that malpractice liability should be eliminated, or that Moore and Gaier's proposal absolutely cannot be implemented. However, extended malpractice liability offers repercussions that should be considered at the outset, and any further extension should not be embarked upon lightly. At the very least, a rush to implement such a proposal seems hasty, given the probative value that alternative approaches, such as the patient safety model, may hold.

Before proceeding, legislators must meet this issue head-on. They can try to solve the problem through increased malpractice

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239. *See* Moore & Gaier, *supra* note 67. Moore and Gaier provide "support" in the case law for their theory that regulatory violations necessarily lead to punitive damages by citing *Figueroa v. Flatbush Women's Services Inc.*, 608 N.Y.S.2d 235 (2d Dep't 1994), which upheld a punitive damages award "based on the existence of factual issues of whether a defendant was performing abortions in violation of state and municipal regulations[.]" Moore & Gaier, *supra* note 67. But the defendant in *Figueroa* apparently was performing abortions without a license (i.e., no legal authority) and thus "'an issue of gross recklessness or wanton conduct ha[d] been raised.'" *Id.* (quoting Figueroa, 201 A.D.2d at 614). It still seems undecided as to whether a pattern of violations constitutes gross misconduct without anything further, or whether a violation of these types of regulations would even amount to gross misconduct. Nonetheless, the idea of taking part in a lawsuit seeking to argue such groundbreaking legal issues doubtlessly holds little appeal to the average physician or hospital.

240. Take, for example, the Libby Zion case. Libby died in 1984, and the case was not ultimately resolved until 1995, with a decidedly disappointing result for her family and attorney. *See supra* notes 60-67 and accompanying text.

241. Kohn et al., *supra* note 87, at 9.

liability (traditional adverse reinforcement, or "blame culture" tools). A different method might be to approach the problem by employing a safety culture regime. In implementing a safety culture regime, legislators must proceed with caution. First, they need to be keenly aware of this very sensitive issue and be prepared to work within doctors' concerns. Second, within the context of their first task, legislators should be prepared to consider the feasibility of extending such liability. In other words, they need to understand if they can implement extended malpractice liability without destroying the framework of safety culture (which necessarily requires the medical community's participation). In fact, as this Article has noted, there is a great deal of evidence suggesting that doctors will not participate in any reform, even within the safety culture framework, if malpractice liability is extended.

Therefore, legislators may need to compromise with physicians who are wary of any new legislation that could lead to more malpractice lawsuits. One way (although not necessarily the only way) to accomplish this is to limit the ability of patients to use the new legislation to extend malpractice suits, particularly where punitive damages are concerned. Although placing limits on malpractice liability is not necessarily the only solution, curtailing malpractice liability in this area is consistent with eschewing "blame culture" philosophy by limiting the exposure of participating institutions to blame and penalties.

3. Financial Considerations and Structural Implications

Again, the government's commitment is integral to the success of meaningful change at hospitals across America. It would be almost useless to simply enact rules telling hospitals what they can and cannot do without strong mechanisms to ensure that hospitals obey the directives. After all, New York told hospitals what not to do, and twelve years later, hospitals continue to openly flout the dictates. On the other hand, strong mechanisms require strong financial commitments.

Sensitivity to the financial plight of many hospitals is a fundamental issue. Many hospitals are struggling (or at least claim to struggle) to stay afloat in the face of managed care, malpractice lawsuits (through high malpractice insurance premiums and "defensive medicine," i.e., ordering more tests to prevent second-guessing of diagnosis and treatment), and rising costs due to technological advances and other factors. If the federal govern-

ment insists upon enacting the proposed legislation as is, it needs to continuously provide hospitals with the funds to cover the expenses of making the changes; most notably, by hiring more medical and ancillary staff and scheduling senior doctors for more hours of direct supervision.

But distributing cash is not enough, as New York's story reveals, without a meaningful mechanism to ensure that the funding is being used for its intended purposes. In addition, threatening hospitals with penalties for improper use of the funds is ineffective. Therefore, Congress also should be financially committed to creating and maintaining mechanisms to insure that the changes are made, regardless of which model it adopts.

We need to implement a strong system, but the system depends upon the strategy the government adopts. If it adopts a strategy similar to the New York model, its agency must be afforded the means and manpower to handle effective enforcement issues as they become necessary. To this end, the Department of Health and Human Services should establish a sub-agency dedicated to these goals.

If, however, we implement a strategy that is more in-line with the patient safety movement and is sensitive to the safety culture that is being implemented in a number of American hospitals, the structure should be modified. The agency still needs means and manpower, but for different purposes—to provide for research and incentives to develop teamwork cohesion and other prized aspects of safety culture.

B. Implementation

That being said, and despite funding provisions in the pending federal bill,[242] it is not at all clear that Congress *wants* to devote considerable resources to implement a full-scale program to insure success.[243] Perhaps passage of the bill is designed more so to make a symbolic statement about what the public considers acceptable hospital practices, but results are not likely to follow.[244] Nor is it clear that the New York model offers the best method of insuring hospital compliance, even while taking the

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242. *See supra* note 197.

243. Indeed, Medicare is making cuts that some estimates say will cost the average teaching hospital $43 million by 2002. *See* Barnard, *supra* note 115.

244. For a discussion of the symbolic purposes of federal legislation, *see* MURRAY EDELMAN, THE SYMBOLIC USES OF POLITICS 22-72 (2d ed. 1985).

aforementioned considerations into account. The great irony of the Bell Regulations is that they were designed to change the culture into one that is more humane, open, and in-line with safety culture values. But it set about doing so by forcing the hand of hospital administrations, which balked at many of the underlying concepts within the bill. A similar federal bill would reinforce wariness of the federal and state government intervention, and reinforce secretive behaviors (e.g., hiding mistakes to avoid liability). A better approach to achieving safety culture within hospitals is to implement strategies through the practices of the patient safety movement.

Therefore, as suggested in the last section, the first step is to identify the behaviors that undermine patient safety. Because a considerable percentage of physicians disagree with the empirical evidence about the effects of residents' sleep deprivation, the federal government should set up a blue-ribbon panel comprised of health practitioners representing America's major medical institutions (e.g., AMA and AHA),[245] as well as some government officials who will determine the validity of these assertions and put the issue to rest. Thus, we keep in mind the main concerns of hospitals, tempered with any overriding patient concerns developed through scientific studies.

Once all the problems have been identified scientifically, the next step is to draft legislative options to eliminate those problems. Theoretically, the hospitals will be more willing to make changes if they are convinced that such changes will significantly reduce patient injury, which (in theory) means less exposure to liability.[246] Realistically, their fear of malpractice liability, as well as other forms of blame, runs deep, and this must be addressed. Again, consistent with the patient safety movement, there are a few ways of approaching this.

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245. Heavy inclusion of health practitioners is consistent with the idea of reaching across traditional boundaries to come up with good solutions. It also helps to combat one of doctors' arguments against government regulation, which is that such regulation is enacted by politicians unfamiliar with the realities of medical practice. *See supra* note 231, and accompanying text.

246. Indeed, there is some evidence that the actual amount of physician negligence does not correlate well with malpractice lawsuits. A group of researchers came to this conclusion after examining 30,000 randomly-sampled records from fifty-one hospitals, conducted 2,500 patient interviews, surveyed 1000 doctors, and reviewed insurance company files for 70,000 medical malpractice claims in New York over a fourteen-year period. The researchers concluded that negligent injuries resulting in malpractice lawsuits under-represent actual negligence injuries by a ratio of one to 7.5, and only one-half of these filed claims result in compensation to the patients.

The first approach is to get rid of penalties by adopting incentives to comply with the directives. Congress could earmark extra money for research grants and distribute those monies to hospitals able to demonstrate good-faith compliance with the regulations. We could earmark special monies (i.e., research funds) that we distribute to the hospitals that provide paper documentation of compliance by setting up schedules that limit residents' hours to statutory limits and require enough senior physicians to be on call or on duty. We should also, deviating from New York's approach, require hospitals each year to provide a budget that shows how the implementation funds were spent. This would provide the appropriate amount of resources and also hold hospitals accountable. It would also eliminate the fines that for some reason seem unavoidable to hospitals, and provide funding for things such as ancillary staffing.

The second approach is to address malpractice liability in a manner that keeps doctors at the table. This could mean curtailing, or disallowing, private enforcement of the statute's contents and/or use of such contents in a malpractice lawsuit (i.e., closing the door to Thomas Moore's suggestion, as discussed earlier).[247] The idea is not to punish retrospectively, but to improve prospectively.

There is reason to believe that doctors would be receptive to endeavors that embody safety culture features and avoid blame culture features. For instance, many hospitals and doctors supported the federal legislation for voluntary and anonymous reporting of medical errors, which was designed to pinpoint problems and find solutions.[248] Although those measures never came up for a vote, the time seems ripe to carry through with the early patient safety movement by way of a thoughtful investigation of, and putting into action solutions to, the sleepy resident problem. If the federal government sees fit to make serious changes to health care delivery, this might be a good compromise to get hospitals to comply and actively participate.

This proposal does not provide specifics on the regulations' content because hospitals and the government must get on the same page in defining the problems. All the details can be worked out thereafter. Such implementation allows the federal government (and possibly interested state governments) to work *with* hospitals, not against them.

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247. *See supra* notes 171 and 239, and accompanying text.
248. *See supra* note 192, and accompanying text.

VI. CONCLUSION

The problem of the sleepy, unsupervised resident presents troubling implications for the quality of health care in America. However, New York's experience demonstrates that blind demands on the medical establishment are not productive of meaningful change in the system. Instead, a better approach works within hospital culture by first understanding it, retaining the valuable parts, and working to eradicate the destructive parts. Eradication should proceed through positive means that encourage cooperative efforts to change the culture, as well as the law.