

Neurosurgical Emergency and Trauma Services: Legal, Regulatory, and Socioeconomic Barriers

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Neurosurgical coverage for hospital emergency and trauma call has been a growing controversy for several years. Hospital emergency department surveys show difficulty either in getting coverage of specialty services in the emergency room (ER), or trouble finding neurosurgeons to whom to refer emergency problems. The American College of Emergency Physicians surveyed 4444 hospital emergency departments in 2004, finding 66% reported inadequate on-call specialist coverage.⁵ Neurosurgery was one of the specialties identified with an ER call coverage problem.

In the emergency call debate, several circumstances contribute to problems with neurosurgical emergency call coverage. First, the number of practicing neurosurgeons is limited, amounting to approximately 3000 board-certified and perhaps another 1500 noncertified or training neurosurgeons available to cover more than 4500 acute care hospitals, so that constant coverage at all hospitals is not feasible. No neurosurgeon can be expected to be on continuous call, and not all hospitals can be continually covered. Second, a number of neurosurgeons subspecialize, limiting clinical services for areas such as pediatrics or cranial surgery, and may not cover emergency call for categories of service they do not routinely provide in daily elective practice.

Third, Emergency Medical Treatment and Active Labor Act (EMTALA) regulations, clumsily trying to enforce ER specialty coverage, may have paradoxically created coverage problems where none may have previously existed. By initially interpreting regulations before 2002 to prohibit coverage of multiple hospitals simultaneously, or prohibiting routine surgery while on call in the emergency department, the Centers for Medicare and Medicaid Services created threats of sanctions for routine practice that may have caused some to reduce, rather than expand call coverage. These regulations were clarified in 2002, reversing the previous interpretation, and recognizing that 365 day per year neurosurgery ER coverage may not be feasible or required for every hospital.²

Fourth, threat of professional liability is perceived by some as a deterrent to neurosurgical emergency coverage. Fifth, neurosurgeons have increasingly expected hospital compensation for what, heretofore, was voluntary coverage of ER call, an exchange for their time and to cover nonreimbursed emergency services.

In 2004, an Emergency and Trauma Services survey was conducted by the American Association of Neurological Surgeons (AANS) and the Congress of Neurological Surgeons (CNS).³ Surveys were sent to 3213 AANS/CNS members; 1031 were returned (a 32% response rate), giving the responses a high level of validity. A second AANS survey was conducted in 2006, entitled the “Workforce Survey,” asking many similar questions regarding emergency services coverage, with a 770 of 2550, or 30%, response rate.⁴ The results from these two surveys form the basis for this presentation.

Fifty percent of the respondents to the survey were in a private practice, 30% in academic practice, and 15% in a mixed academic and private practice. Most were in small (2–5 members, 35%) or medium-sized groups (6–20 members, 25%). Only 12% were in solo practice. The mix of respondents corresponded closely to the distribution of AANS membership.

Forty percent of respondents worked or took call at a Level 1 trauma center. Thirty-five listed a Level 2 trauma center as their primary affiliated institution, and 25% listed either a Level 3 hospital or no designation. Thus, respondents were approximately equally distributed between major trauma centers and secondary, or minor, trauma centers. The distribution allowed a balance of perspectives between neurosurgeons in major trauma referral centers and those serving smaller community hospitals.

One question of particular importance was how many neurosurgeons take emergency call. A growing perception among ER physicians and academic medical centers is the difficulty in finding a neurosurgeon to accept an emergency patient, and an increased volume of emergency transfers from smaller private hospitals to large academic medical centers. The 2004 survey showed that 83% of responding neurosurgeons or their practice group provided 365 day per year call.

The question was posed differently in the 2006 survey, asking whether the respondent took emergency call, without specifying the number of hours or days covered. Ninety-three percent responded that they took emergency call. Those who took no call had a number of reasons, many related to age and hospital call exemption policies. Thus, an overwhelming majority of neurosurgeons responding to the survey not only took routine call, but also, through group call sharing, provided coverage every day of the year. The claim that growing numbers of neurosurgeons did not accept emergency call was exposed as a myth.

The frequency of emergency call ranged from as often as every other day for 20%, to less than once a week for 15% of respondents. Forty percent covered every 3 to 4 days, and 25% covered every 5 to 7 days. Fully 85% claimed that their hospitals required call as a condition of medical staff membership. Only 10% of hospitals allowed part-time call, and only 5% did not require any emergency call as a condition of medical staff membership.

Half of the respondents covered call at only one hospital. However, 40% took call at two to three hospitals, and 10% covered four or more hospitals. It was clear from the survey that the large majority of neurosurgeons responding to the survey cover emergency call, and a substantial minority covers more than one hospital simultaneously.

Those 16% in the 2004 survey who did not fully cover 365 day per year call, and the 7% in the 2006 survey who took no call at all, had a number of reasons for their decisions not to provide emergency coverage. For some, the question failed to recognize call-sharing arrangements with other groups. The largest percentage (36%) of those who did not cover ER call simply did not have enough neurosurgeons available to offer full 365 day per year coverage, without creating an excessive or unrelieved time burden. In 2004, 16% of those not covering emergency call cited liability concern as the reason. Lack of compensation for emergency services has been another concern, and 7% of respondents not taking emergency call in 2004 chose a lack of reimbursement as their reason. Six percent quoted life-style interference and 5% pointed to practice disruption as their reasons for not participating in ER call. Thirty percent in the 2004 survey, and fully 50% in the 2006 survey had other reasons for not being on the emergency call roster, most of which were related to age or length of service exemptions from call.

Many neurosurgeons limit their practice to a subspecialty, a tendency growing among both private and academic practices. One fallout of subspecialization is noncoverage of emergency call for neurosurgical conditions not treated in routine practice. There is controversy regarding the validity of the reasons for excluding call for conditions outside a subspecialty practice. Those who limit practice and call generally think that their time should be used where their expertise is greatest, and that treatment of occasional emer-

gency problems outside their area of subspecialty expertise poses substantial liability risk, as well as inadequate current experience. For instance, a solo neurosurgeon engaged in a spine surgery practice may think their competence for treating aneurysmal subarachnoid hemorrhage is outdated, and those cases should be referred directly to a center with full neurosurgical and interventional neuroradiological capability.

A substantial minority (37%) of neurosurgeons responding to the 2006 survey limited their practices in some way. Among all respondents, 21% excluded pediatric patients from their practice; or, considering those 37% who reported limiting their practice, 57% listed pediatrics as an excluded service. A small numbers of respondents excluded cranial service (4%), trauma (5%), or spine (2%). The survey did not inquire about the reasons for limiting services, but pediatric exclusions are significant, and are likely related to unavailability of support services, such as pediatric subspecialties and intensive care. On the other hand, the number of neurosurgeons excluding cranial service or trauma call was small, dispelling the notion of a growing trend for neurosurgeons to eliminate cranial privileges to avoid emergency call. Although scattered anecdotal examples of neurosurgeons dropping cranial privileges to avoid trauma call have been cited, the survey data would indicate that these are isolated practice decisions, and not a general trend.

The 2004 survey asked which emergency services were not covered. Seventeen percent of neurosurgeons responded that they did not cover pediatric trauma, 7% did not cover cranial trauma, and 8% did not cover spinal trauma. A second question asked which *nontrauma* services were not covered. The percentages were very close to those in the first question. Nineteen percent of respondents did not cover pediatric problems, 7% did not provide cranial services, and 7% did not provide spinal surgery service. The reasons for not covering these services were not included, and are speculative. However, it seems likely that these services were eliminated from practice as a matter of professional preference or subspecialization, rather than avoidance of emergency call. A neurosurgeon with an exclusive spine specialization, after years of restricted practice, may feel reluctant to take responsibility for a complex head-injury patient. Although most neurosurgeons continue to provide trauma services for which they were trained, some have chosen to narrow the focus of practice, eliminating both trauma and routine services outside their area of interest. Whether that choice represents a legitimate practice decision, or an abrogation of traditional professional duty, is an unresolved professional and social debate.

Beginning in the early 2000s, reports appeared of hospital stipends paid to neurosurgeons for emergency call coverage. Payment of stipends for emergency call service, traditionally a responsibility required for hospital medical staff active membership, is another controversial issue.

Among respondents to the 2004 survey, 35% reported receiving a hospital stipend for taking emergency or trauma call. The most common compensation was a daily stipend, but 15% reported other arrangements, such as compensation per case for uninsured care.

The amounts paid for daily ER call stipends varied across a wide range, without geographic pattern (Fig. 25.1). Fifteen percent received \$500 or less per day. Ten percent received \$501 to \$750; 17% (2004 survey) or 26% (2006 survey) received \$751 to \$1000 per day; 25% were paid \$1001 to \$1500 per day; 8% received between \$1501 and \$2000 per day. In 2004, 7% reported receiving more than \$2000 per day, whereas, by 2006, 15% reported daily stipends of more than \$2000. The reason for the variation in ER stipend payment could not be ascertained from the survey data, but on the basis of individual comments, seemed to vary according to local hospital needs and neurosurgeon availability. The average stipend was \$850 per day, and the median stipend was in the \$1001 to \$1500 range.

The 2006 survey asked what plans respondents had for stopping call in the future. Thirty-eight percent had no plans for stopping call, 21% listed retirement as their future reason, 18% listed lifestyle interference, 8% said insufficient reimbursement, and 7% chose practice interference. Less than 1% selected malpractice risk as the reason to eliminate ER call. When asked when they planned to stop call, the responses were equally distributed over the next 20 years, with 20% stopping during each 5-year interval, and 20% with no future date planned. The timing for cessation of call may have related to numbers of years in practice, although the correlation was not confirmed in the survey.

Legal concerns have been expressed as reasons for eliminating emergency call. The legal concerns take two forms: first, the risk of EMTALA violation for failing to see or treat an ER referral; second, the malpractice risk for

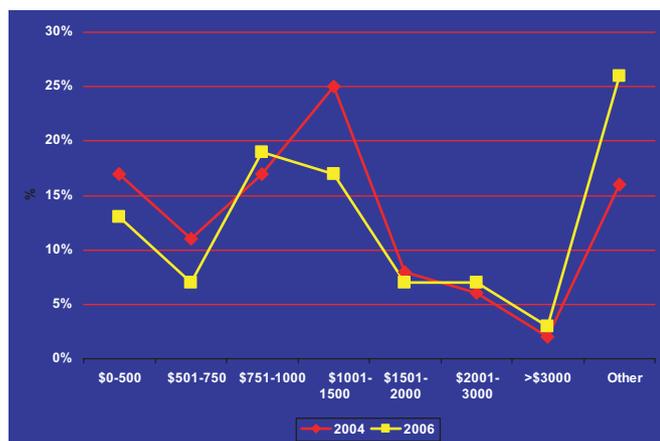
treating emergency patients. The survey showed that 2% of respondents had been charged with an EMTALA violation, but the survey did not ask for the outcome of the charges. EMTALA risk seemed to be a minimal risk and not a reason for ER call termination.

Medical liability costs have been an issue for some, with reports that malpractice insurance premium costs were reduced when ER call was terminated. In the 2004 survey, 13% reported a reduction available or received in malpractice insurance premiums for not taking call. However, only 2% claimed a reduction available in premiums in the 2006 survey. Liability insurance cost seemed overall to be an insignificant reason for reducing call.

Another issue related to liability is how often a neurosurgeon is sued after treating an emergency patient. In the 2004 survey, 34% said they had been sued during their career by a patient accepted through the ER. Of these 34%, 55% had been sued once, 37% 2 to 3 times, and 7% more than 3 times. The fact that one-third of respondents had been sued by emergency patients seemed to justify a fear of liability and a reason to avoid the risk. However, the number of emergency-related lawsuits has to be balanced against the overall risk of liability in routine practice. The survey did not ask how many non-emergency related lawsuits the respondents had incurred. Data from the Doctors' Company for years 1995 to 2001 has shown neurosurgical liability to be the highest among all specialties, with a 55% average annual frequency of lawsuits, or a malpractice lawsuit expected among insured neurosurgeons once every 18 months.¹ Without a denominator figure of how many total lawsuits the respondents had received, it is difficult to place the emergency patient liability frequency in context.

The issue of liability is further clarified by a study entitled *Liability is Rooted in Elective Spine Cases: 4 Years of TDC Data Analyzed*, by Richard Wohns.⁶ The study analyzed neurosurgical data from The Doctors' Company between 2000 and 2004. Losses and defense costs for elective cases far exceeded those for emergency cases, confirming that, for that insurer, emergency cases posed no added threat, and perhaps even less than routine cases. For elective craniotomies, \$1.7 million was paid out, whereas \$0 was paid for emergency craniotomy cases. Spine surgery created a much higher cost, with \$15 million paid out in elective cases, but only \$0.5 million paid in settlements or awards for emergency spinal cases. The volume of elective is undoubtedly much higher than emergency cases, and accounts for much of the higher elective surgery liability cost. The data seems to confirm that emergency surgical cases are not a high liability burden.

As a result of the survey analysis, several conclusions could be drawn regarding neurosurgeons covering emergency and trauma call. First, contrary to some recent claims that neurosurgeons refusing to take call were creating a shortage



2004: AANS/CNS Emergency and Trauma Services Survey /2006: AANS Workforce Survey

FIGURE 25.1. ER stipends in 2004 and 2006.

of neurosurgeons available for emergency services, the survey showed that 93% of neurosurgeons take ER call, and those who do not usually are exempted by age, length of service, or other hospital policies. Second, medical liability risks are actually minimal for emergency patients, when compared with routine elective surgical practice. Third, at least a third of neurosurgeons around the country receive some form of stipend for covering emergency call. Fourthly, neurosurgeons who limit services usually do so for reasons of practice preference and experience, not to avoid emergency call.

In the past, neurosurgeons, similar to other physicians with hospital privileges covered emergency call as a condition of medical staff membership. Most hospitals still require ER call in exchange for active membership privileges. However, the relationship is changing, and a growing number of neurosurgeons expect compensation for their professional time, whether it is spent with a patient in an office, providing surgical services, or simply being available to take emergency call.

The assertion that neurosurgeons are failing in growing numbers to provide emergency services, thereby contributing

to the shortage of specialists available to see or accept emergency referrals, is refuted by the survey data. The problem is more complex than the simplistic belief that more call duty by more neurosurgeons would solve the emergency referral dilemma. The solution to call shortages is not answered by the survey, but regionalization of trauma services to appropriately equipped and staffed facilities, prompt transfer protocols, and compensation for emergency services seem more likely to promise solutions than insistence on traditional voluntary emergency call duty.

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