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The Status of Neurosurgery in the United States: 2010 and Beyond

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Describing the social, political, economic, and cultural factors that affect the practice of neurosurgery in the United States is a daunting task. To condense those issues into an article, appropriate for a journal, let alone one intended for a world audience, is an even greater challenge. Many of the issues confronting neurosurgeons in the United States are vastly different from those in developing nations struggling to meet far more basic needs related to providing patient care. The following discussion focuses on the complex regulatory environment that governs the practice of neurosurgery in the United States, considers concerns related to recruiting and training the best and the brightest, and discusses factors shaping the practice patterns of contemporary neurosurgery.

NONCLINICAL CONSTRAINTS ON PRACTICE

Perhaps one of the single most important factors affecting the practice of neurosurgery in the United States is the proliferation of health-related federal statutes and their ever-changing and expanding interpretations. Kusske's excellent detailed discussion of these laws as they pertain to neurosurgery forms the basis of much of the following overview (32). It is almost impossible to understand the current practice of neurosurgery in the United States without some grasp of the far-reaching effects of the legal system on the medical system as a whole. However, the myriad and subtle implications extend far beyond the scope of this article.

Regulatory Concerns

Until the latter half of the 20th century, health care in the United States was treated as a public service and not as a business; doctors practiced medicine and were not considered businessmen. Physicians had little need to concern themselves with government regulations and enjoyed considerable autonomy in their professional lives. They could hospitalize patients and conduct tests as they deemed medically necessary, and the predominant health care model was fee for service.

Now, however, a complex regulatory environment permeates almost every aspect of medicine, and the concomitant erosion of professional autonomy has caused considerable concern among practitioners (11). Neurosurgeons are burdened with the need to be familiar with aspects of practice such as coding and reimbursement to ensure compliance with these complex legal

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- Government regulations
- Graduate medical education
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- United States
- Workforce

Abbreviations and Acronyms
ABNS: American Board of Neurological Surgery
ACGME: Accreditation Council for Graduate Medical Education
CMS: Center for Medicare and Medicaid Services
DBS: Deep brain stimulation
EMTALA: Emergency Medical Treatment and Active Labor Act
ER: Emergency room
ERISA: Employee Retirement Income Security Act
FCA: False Claims Act
HIPAA: Health Insurance Portability and Accountability Act
JCAHO: Joint Commission on the Accreditation of Health Care Organizations
MOC: Maintenance of Certification
MRI: Magnetic resonance imaging
NQF: National Quality Forum

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restrictions. Such issues can only be ignored at the potential risk of loss of practice, huge financial penalties, and even prison.

This restrictive regulatory environment partially arose from the unintended consequences of workplace actions during World War II when a National War Labor Board was created to help settle disputes in the workplace that could affect war production (32). Wage increases were restricted to support the war effort. To attract workers, employers therefore began to provide fringe benefits, which included health care insurance. The institution of work-based health insurance was established, and the practice soon spread. After the war the federal tax code was changed to make these benefits tax free, in effect, subsidizing health care. Divorcing patients and physicians from the direct costs of health care, including insurance premiums and medical care, created a sense of entitlement among the public and decreased the incentives for physicians to control costs (32).

In the 1960s, as part of Lyndon Johnson's Great Society reforms, Medicare was enacted to extend health benefits to include senior citizens who were having an increasingly difficult time obtaining affordable private insurance once they retired. Enacted at the same time, Medicaid was created to cover low-income or unemployed individuals and families. These social insurance programs promulgated a system based on third-party payment that eventually reshaped the practice of medicine in the United States. The programs had three main effects. First, they infused prodigious amounts of money into the health care system and further isolated consumers and physicians from the reality of costs. Second, the bill was formulated so that Medicare would provide reimbursements for graduate medical education, a topic discussed later. And, finally, when Medicare mandated that care providers accept set fees for services, other insurance providers quickly followed suit. Eventually, the fee-for-service model of health care was replaced by the managed care model that dominates today.

As remuneration for physicians and hospitals increased under the social insurance programs, some individuals and facilities succumbed to the temptation to pursue unethical practices such as submitting and collecting excessive charges for services, misrepresenting a patient's care or providing substandard care, accepting kickbacks or paying bribes for referrals of covered patients, or making self-referrals. Consequently, legislation was enacted to stem such abuses when federal reimbursements were involved.

In 1972, the very broad Federal Anti-Kickback law was among the first acts to be passed in response to the growing Medicare fraud. This legislation made it a felony to knowingly accept or receive payment to influence the referral of a patient receiving services in a federal health care program. Violations can result in imprisonment, other criminal and financial penalties, and exclusion from federal health care programs, including Medicare and Medicaid. There are safe harbors, but this is a serious law subject to complex and judicial precedence, and neurosurgeons must understand its implications to avoid even the appearance of wrongdoing.

In 1986 the False Claims Act (FCA), which was first used to deter and punish fraudulent claims among defense contractors in the American Civil War in the 1860s, was refocused on health care. Under this law providers that submit false or fraudulent claims for federal money can be subjected to severe criminal or civil penalties, including exclusion from payment from governmental sources. The damage to reputation alone can end a medical practice. The law also protects whistleblowers who report fraudulent acts from retaliation. Furthermore, whistleblowers can share in the proceeds of governmental suits, increasing the incentive to file suits. Medicare abuses and errors continue to cost American taxpayers billions of dollars each year, exacerbated by fraud on the part of contractors hired to uncover Medicare fraud (42).

In the 1990s, the Stark Law and its subsequent modifications were enacted to prohibit physician self-referrals to medical facilities in which a provider or family member has a financial interest. Exceptions to this detailed and complicated law exist to allow legitimate business practices, but severe civil penalties apply when it is violated.

The Anti-Kickback and Stark laws are often confused but differ in significant ways. The Stark provisions cover only physician referrals under Medicare and Medicaid, whereas the Anti-Kickback law applies to anyone doing business with Federal health programs. The Stark laws can be violated without intent in contrast to the Anti-Kickback laws, which requires proof of intent to violate the law to gain a conviction. However, when the Stark provisions apply, so do those of the Anti-Kickback law. Thus, when analyzing a business venture or transaction, entrepreneurial neurosurgeons must review and remain compliant with both laws.

The Sherman Act, enacted more than 100 years ago, prohibits attempts to monopolize or to conspire to monopolize any part of trade or commerce that would restrain competition. In 1971 a landmark Supreme Court case, *Goldfarb v. Virginia State Bar*, dramatically changed the practice of medicine by ruling that the learned professions are engaged in trade or commerce and subject to the provisions of the antitrust policy represented by the Sherman Act. By ending exemption from antitrust laws, this decision eroded the ability of the medical profession to act as a self-regulating body with the right to determine its own prices and quality standards (32). Middlemen were free to act on behalf of consumers to contract with physicians at competitive rates, a situation that helped promote the managed care reforms. Neurosurgeons now must be keenly aware of forming networks to negotiate with large payers such as insurance companies or of engaging in certain group boycotts to avoid the suspicion of illegal price fixing.

In 1974, the Employee Retirement Income Security Act (ERISA) was enacted to govern welfare (health) benefit plans offered by employers. ERISA preempts state laws relating to health-benefit programs standardizing how employers can establish a plan, provide specific benefits, and proscribe plan administration (32). It also shields companies that contract with ERISA employers from state insurance jurisdiction and liability for treatment decisions that harmed covered individuals, thereby greatly affecting malpractice law. ERISA, however, does not preempt state laws that regulate the business of insurance, and states can impose restrictions on insured benefit plans purchased by employers. Self-funded plans, however, are not interpreted as insurance and therefore are not subject to state law. The unintended consequence of this law was to encourage appropriately sized organizations to self-insure, leading to a dichotomy between the regulation of insured and uninsured plans (32). This bifurcation