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How neurologists are paid

Part 2: Private practice, research grants, academic and nonclinical activities

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Abstract

Part 1 of this series focused on factors influencing payment for patient care services. In Part 2, we review compensation models for nonpatient activity such as medical legal reviews, committee participation, and collaboration with the pharmaceutical industry. Compensation to neurologists in private practice is commonly in the form of guaranteed salary and bonuses. Salary for neurologists in academic medicine has changed considerably over the past 3 decades, from small departments with faculty supported by grants and volunteer faculty, to large departments with faculty split between those with research grant support and those focusing on patient care and teaching. Compensation models in academic medicine range from straight salary without bonus to straight salary with personal or shared bonus and salary based on relative value units. **Neurol Clin Pract 2015;5:405-411**



We review compensation models for nonpatient activities such as medical legal reviews, committee participation, and collaboration with the pharmaceutical industry.

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Clinical research trials

Clinical research trials can be profitable for the neurologist in private practice and academics, although investigators may lose money through inexperience in recognizing all of the components of clinical research. Common sources for funding include the NIH, industry, postmarketing projects, and venture and external capital. Neurologists who underestimate the value of their time and the time of their research collaborators may undercharge for critical aspects of the research and may complicate the situation by underenrolling the projected number of research subjects. Ideally, a neurologist interested in pursuing clinical research should choose trials that complement his or her clinical interests and patient demographics, as well as trials that utilize the available procedural services within the practice. In an outpatient setting, an investigator can take advantage of existing staff, space, and supplies. The sharing of available resources leads to higher compensation for the investigators and facilities that use ancillary services for a component of a research trial, e.g., MRI, EEG, nerve conduction studies, sleep studies, and infusion of experimental medications. However, budgets for these trials have become lean in recent years. Even though these trials may improve departmental income, they are not as financially profitable as they once were.

Clinical trial budgets must include salary support for the principal investigator. Many trial budgets only include funding for neurologic history and examinations for the physician investigators (PI). A line item with appropriate funding for PI support should always be included in a clinical trial budget. This pays for administrative oversight and management of the study that is often overlooked or underestimated at the time the contracts are prepared. A portion of the PI's salary should be paid from the trial.

All physician effort associated with the expected tasks must be included in the budget for training, including attending investigator meetings, protocol review, meeting with representatives of the clinical research organizations, and the study coordinator and other staff participating in the trial. The institutional review board (IRB) submission (application preparation and IRB fees) should be charged to the sponsor as a nonrefundable cost. IRBs often charge for amendments and the study sponsor should be held accountable for these payments. These payments should be invoiced when the contract is signed and not returned to the sponsor if research subjects are not enrolled. The sponsor should pay for screening patients who do not meet criteria for participation.

Nonpatient activity income

Many neurologists derive a portion of their income from activities not directly related to patient care. These income streams include serving on hospital committees, as speakers for a pharmaceutical company, or as expert witnesses in medical legal cases.

Compensation for serving on a hospital committee is regulated by the Stark and Anti-Kickback regulations and must be at a fair market value.¹ This time away from the office may prove to be more or less valuable than billing for direct patient activities depending on the compensation. Nevertheless, the intrinsic value of serving on these committees should always be considered. Committee members are usually perceived as valued leaders in their community and participation may open the door to referral bases and greater participation in

Expert witness and associated consultative services may be an effective means to augment income if a neurologist is an established expert in a defined area of neurology.

administration decision-making. In some hospital compensation models, committee duties are not reimbursed directly, but the neurologist is given a reduction in their work relative value unit (RVU) requirement for the years they serve on the committee.

The Physician Payment Sunshine Act, a component of the Patient Protection and Affordable Care Act, requires the public disclosure of speaking and consulting fees.² Reports of payments made to physicians in 2013 were published in 2014. This reporting has deterred some physicians from speaking publicly because of a concern over consumer backlash from the published display of this information.

Compensation models for private practice

In today's neurology practices, there are several options for compensating both physician owners and employed physicians. A straight production model is common in private practice and some academic and hospital-based practices. Total compensation is calculated from a formula of revenue dollars plus income from ancillary services minus direct practice expenses and an allocation of overhead expenses, which will vary by pay period, month, or quarter. Sometimes, when using this model, a practice will start a new neurologist at a base salary and add bonus income based on physician effort and other variables that may be linked to the overall financial success of the practice. Many practices start new neurologists on a guaranteed base salary for 1–2 years and convert to the payment revenue model in subsequent years.

Some practices use a lower base salary and add incentives based on work RVUs or collections exceeding a predetermined revenue threshold. Occasionally, groups will set minimum requirements to reach varying compensation levels, such as a minimum number of work RVUs or a minimum number of appointment hours. This may be most effective when physicians desire to work a reduced schedule or have other commitments that restrict their ability to work as many clinic hours as other physicians in the practice. In some practices where the minimum RVU model is implemented, the neurologist is held accountable for making up the slots of no-show patients or late cancellations in order to meet the expected RVU requirements for a given time period.

Business optimization

Efficient operations are critical to maximizing profits. When striving for a lean organization, changes in the work flow will be necessary. This may involve a top-to-bottom process for evaluating staff and steps to focus on streamlining processes and limiting redundancy. To accomplish this, a physician may consider self-education in the established principles of either Lean or Six Sigma.³ The tools utilized through either of these methods have been applied to health care operations with success in streamlining operations and improving care while lowering costs.

Medical legal activities

Expert witness and associated consultative services may be an effective means to augment income if a neurologist is an established expert in a defined area of neurology. Generally, the pay rate for medical legal services depends on the type of service rendered. It is common to charge an hourly fee for the time spent reviewing medical records, preparing expert reports, and meetings or phone calls. A higher fee may be warranted for depositions and court appearances. Frequent depositions, court appearances, and case reviews during clinic time may lead to

lost patient revenue, unnecessary staff support costs, loss of ancillary testing revenues, and decreased patient access, all which could affect referring physician and patient satisfaction.

Physician compensation in academic practice

Until about 25–30 years ago, academic neurology employed a relatively small number of neurologists. Departments often comprised salaried physicians who were primarily involved in research and who spent little time in patient care, and a separate voluntary staff of independent (private practice) neurologists. If a base salary existed, it was often a teaching stipend from the medical school or at best a salary equal to that of a basic science faculty member within the undergraduate/graduate school of the university. It was derived from grant funding, department funds as determined by the department chair or dean, and a previously agreed-upon percentage of billings or collections earned for patient care.

In the last 2 decades, academic practices have changed considerably. Some faculty have lost external and university funding for research and have transitioned from laboratory work to clinical activities. The creation of 2 academic tracks has permitted a hierarchy to remain by continuing the traditional academic track, often judged by eternal funding and the quality and number of publications, and adding a clinical academic track that permits promotion based on teaching and other services. Some faculty (despite retaining their teaching obligations) in the medical schools have lost their teaching stipend. Another factor is lost funding from their university or state for many neurology departments in medical centers. This creates conflict unless the dean and hospital administration, often employed by different corporations, are not fully aligned on the mission of the medical center. These forces require academic neurology departments to become financially independent and either establish their own cost centers within the hospital system or join a practice plan with the other clinical departments within the medical center.

Many of the academic medical centers (AMCs) have recruited physicians who were once in private practice and have spent little time in academic medicine or teaching. These clinicians bring to the academic department a wealth of patient management experience and skills. In some instances, these physicians do not move their practice location, but are absorbed into the academic system that assumes their administrative responsibilities and pays their salary. These offices serve as satellite locations for the neurology departments. The financial models that drive salaries of the satellite physicians resemble those in private practice.

Several salary models exist for neurologists employed by AMCs, but many are toward the fixed salary model, with or without a bonus potential. These are salary models that would seem foreign to many nonmedical industries. For example, the salary for junior members starts below that of the most senior members, with the expectation that pay raises occur either gradually over the years, or in quantum steps that coincide with academic promotions. Each institution has its own system for pay increases, but in general it takes about 10–15 years to achieve the maximum salary potential. Many AMCs use the American Association of Medical Colleges compensation surveys as salary benchmarks. This compensation model is unlike other professions, for example, attorneys or accountants, where charges for the service are based on experience, perceived worth, and prestige. Highly valued attorneys, bankers, and businessmen are compensated commensurate with their skills, reputation, and ability to attract new business. In medicine, the most senior and internationally renowned physician cannot charge more for a patient encounter than the least experienced physician. Even though the billing potential is the same regardless of experience, the senior physicians earn more than junior physicians, as a reward for experience, reputation in the community and state, and loyalty to the institution. To some degree, academic medicine is a profession where junior members support the salary of the senior members of a department. Although it can be argued that this model has worked well for years, the model may fail if revenue streams from grants, research revenue, and neurodiagnostic procedures continue to decline. This compensation scheme may discourage young faculty members who may sense underpayment for their services and are unwilling to invest the time (in years) to be rewarded for seniority.

Over decades, most academic neurology departments have differentiated into multiple subspecialties and 2 camps: those that primarily generate revenue from standard evaluation and management (E&M) patient encounters such as neuro-oncology, general neurology, and neurocognitive dementia, and those subspecialties whose revenue derives from procedures, primarily neurophysiology, sleep, and chemodervation. A neurologist with a saturated schedule can bill more units of service per time interpreting EEGs and EMGs than performing E&M services. In addition to the work RVUs generated, the technical fees for these services (typically two-thirds of the total charge), at least historically, provided a substantial source of revenue to the department or hospital. It is common for those neurologists interpreting EEGs or EMGs full-time to generate 50%–75% more work RVUs per unit of time than a neurologist performing E&M services. In addition to EEG and EMG revenue, other procedures that generate both work RVUs and technical RVUs include sleep studies, intraoperative monitoring, and botulinum injections. IV infusion suites for headache management and treatments for multiple sclerosis and neuropathies can also be lucrative for neurology departments.

In a private practice setting, a neurologist would generally be engaged in both providing E&M services for the patient as well as performing and interpreting procedures. However, in academic practices, the E&M and procedures are disproportionally divided along subspecialty lines. In most academic settings, the salaries for neurologists who perform high-revenue-generating activities are the same or only slightly higher than those for neurologists with an equal amount of subspecialty training who are performing mainly E&M services. The rationale for not having a large salary differential for neurologists at the same academic rank is (1) the nonprocedural neurologists generate many of the referrals for the high reimbursement studies in a department, (2) most neurologists performing E&M alone would not be able to generate sufficient revenue to support their salary, and (3) a neurology department would quickly become embittered and dysfunctional if a large salary difference existed between the general neurologists and proceduralists. In most academic neurology departments, a symbiosis exists where the work of junior neurologists supports senior member's salaries, the nonprocedural neurologists provide the proceduralists patients to study, and the proceduralists generate incremental revenue sufficient to support their own salaries and other members of the department.

Several salary models have evolved to compensate neurologists in academic medicine. Those include straight salary without bonus, salary with personal bonus, salary with a shared bonus, and salary based on work RVUs. The main characteristics of each are described in the table.

For at least one department, the shared bonus is determined by the number of RVUs generated above a predetermined level as well as agreed-upon academic, educational, and professional goals (B. Soronson, personal communication, 2015). This requires the assignment of work RVU equivalents for teaching, lectures, publications, and other productive activities with the source of support coming from general funds of the Department of Neurology. Other AMCs incorporate research productivity, teaching, internal and external committee effort, and other criteria established by department leadership into shared bonus calculations. Another model is to salary physicians in academic departments based on agreed-upon targets (e.g., RVUs, publications, grant submissions) and responsibilities (e.g., committees, teaching, administration). In this way, financial incentives would be eliminated and the physicians could focus on the expected work for the agreed-upon compensation.

Research grant support

For a research enterprise to be successful, research grants and contracts must pay the physician's efforts in addition to support for the center and employees. Traditional grants have salary and fringe benefits allocated to the principal investigator and coinvestigators. A salary cap of \$183,300 currently is mandated by NIH, but this will likely change in the future, usually in January. If a physician's salary exceeds this cap, the institution is required to pay the

Table Comparison of academic neurology compensation plans

Straight salary without bonus	Neurologist has a fixed schedule of patients; employer has predictive model for number of show and no-show patients; employer manages schedule to fill all available slots; neurologist does not have the power to modify schedule without renegotiating contract
Straight salary with personal bonus	Base salary and bonus based on productivity above a RVU threshold or another threshold; neurologist has freedom to attain threshold only or work diligently to achieve bonus
Straight salary with shared bonus	Bonus can be divided equally or proportionately among faculty; all neurologists in department invest in a vision to achieve the bonus; each member assigned a personal RVU goal
Salary based on RVUs	Resembles plan of a neurologist in private practice; salary based on RVU production or actual percentage of receivables; failure to attain RVU production results in cut in salary

RVU = relative value unit.

difference between the salary and the cap. For example, if the physician's salary is \$225,000, and has a 10% research effort (\$22,500) and salary support is requested, the grant pays \$18,330 and the institution has to provide \$4,170 as a cost share contribution.

Career development or K awards

K awards are offered by the National Institute of Neurological Disorders and Stroke. Most of these awards currently provide salary support to the awardee of \$85,000 to \$105,000 per year and most provide support for fringe benefits. Other sections of NIH offer K awards between \$75,000 and \$105,000 toward salary support. Typically K awards require a minimum of 75% effort focused on the funded research project. The NIH closely scrutinizes faculty effort on these projects so it is critical the actual effort meets the requirements of the award.

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AUTHOR CONTRIBUTIONS

Peter D. Donofrio: drafting/revising the manuscript, acquisition of data. Gregory L. Barkley: drafting/revising the manuscript. Bruce H. Cohen: drafting/revising the manuscript, study concept or design. David A. Evans: drafting/revising the manuscript, acquisition of data. Greg Esper: drafting/revising the manuscript. Bryan Soronson: drafting/revising the manuscript. Jeffrey Buchhalter: drafting/revising the manuscript, study concept or design. Amanda Becker: drafting/revising the manuscript.

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P.D. Donofrio serves on scientific advisory boards for CSL Behring, UCB CellTech, and Baxter; has received funding for travel or speaker honoraria from Talecris Pharmaceuticals; serves on the editorial board of *Muscle & Nerve*; receives research support from CSL Behring; and has received honoraria from the AAN for speaking activities and serving on committees. G.L. Barkley receives a stipend from the AAN for time spent at the AMA-RBRVS Update Committee (AMA-RUC) as a representative of the AAN; receives research support from NeuroPace and NIH (National Institute of Neurological Disorders and Stroke, NICHD); and has received honoraria from the AAN for speaking activities and

serving on committees. B.H. Cohen serves on scientific advisory boards for Stem Cell Transplantation for MNGIE (nonprofit), Neurofibromatosis Consortium, and the Department of Defense, and as Chairman of the External Advisory Board of Clinical Protocols; serves on the editorial boards of *Pediatric Neurology* and *Mitochondrion*; serves as Editor for *Motive Medical Intelligence*; serves as a consultant for Stealth Biotherapeutics and Mitobridge; serves/has served on speakers' bureaus for Transgenomic Labs, Courtagen Labs, and United Mitochondrial Disease Foundation; serves as a consultant to Health and Human Services for the Division of Vaccine Injury Compensation Program; receives research support from NIH, Edison Pharmaceuticals, Raptor Pharmaceuticals, Stealth Biotherapeutics, and Reata Pharma; has received reimbursement for travel expenses related to scientific study management; has provided expert testimony in medico-legal cases; and has received honoraria from the AAN for speaking activities and serving on committees. D.A. Evans has received funding for travel from Merz Pharmaceuticals; serves on the editorial review board for *MGMA Connection*; is Chief Executive Officer of Texas Neurology; serves as a consultant for Merz Pharmaceuticals and Allergan; and has received honoraria from the AAN for speaking activities and serving on committees. G. Esper receives compensation for Executive Education as an affiliate professor for HEC Paris School of Business; receives research support from the American Association of Medical Colleges; has provided expert testimony in medico-legal cases; and has received honoraria from the AAN for speaking activities and serving on committees. B. Soronson has received funding for travel or speaker honoraria from the Society of Clinical Research Associates, Medical Group Management Association, Texas Neurological Society, and Campbell Alliance; serves as a consultant for Raleigh Neurology and Texas Neurology; and has received honoraria from the AAN for speaking activities and serving on committees. J. Buchhalter serves on scientific advisory boards for NIH, Charlie Foundation, and IDIC 15; has received funding for travel or speaker honoraria from and serves as a consultant for Eisai Ltd, Lundbeck, and Upsher-Smith Labs; serves on the editorial boards of *Clinical Neurology News* and *Pediatric Neurology*; receives research support from Alberta Health Services; and has received honoraria from the AAN for speaking activities and serving on committees. A. Becker is Senior Director, Medical Economics & Quality for the American Academy of Neurology. Full disclosure form information provided by the authors is available with the **full text of this article at Neurology.org/cp**.

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