

NEUROHOSPITALISTS: A NEW TERM FOR A NEW BREED OF NEUROLOGIST

By Orly Avitzur, MD, MBA

Two years ago Duff A. Rardin, MD, was one of six neurologists sharing unassigned call for an 800-bed community hospital in Asheville, NC. When the other group, a large multispecialty practice, dismantled, only three neurologists were left to cover.

To address this crisis, the hospital hired two neurohospitalists, one who had completed a vascular fellowship, the other, a community neurologist. "Prior to this change at the hospital," explained Dr. Rardin, "my partner and I had to do consults or admit our patients from the ER during the day. These responsibilities resulted in abrupt disruptions to office hours, especially when we had to leave to deal with thrombolytic cases. Now these patients are managed by the hospitalist, allowing us to be much more productive in the office."



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WHY THE NUMBERS GROW

The use of hospitalists – defined by the Society of Hospital Medicine as physicians whose primary professional focus is the general medicine of hospitalized patients – has been growing rapidly. There are an estimated 10,000 such designated physicians in North America today, and the Society of Hospital Medicine estimates there will be 25,000 by 2010.

This may, in fact, be a conservative estimate as several forces may make this field more attractive to physicians and hospital administrators alike. Neurohospitalists – neurologists whose primary focus is the care of hospitalized patients – may be at the very center of this flux.

At least, it might for stroke care. In August, Medicare agreed to begin paying hospitals for the use of tissue plasminogen activator or tPA. Until then, hospitals were paid a flat rate of approximately \$5,700 per case of stroke, regardless of whether tPA was used; in the new Medicare framework, the *Wall Street Journal* reports, hospitals will be reimbursed a base rate that is about \$6,000 more per case if they use the drug.

As many hospital administrators are working to achieve accreditation as stroke centers and general neurologists are finding the interruptions to busy office hours more onerous, alternative means of meeting the demands of the three-hour optimal treatment window for tPA are being sought and a new breed of neurologist is being created.

NEUROLOGY EXPERTISE NEEDED

David J. Likosky, MD, is one such neurologist. Board-certified in both internal medicine and neurology, he has worked

as a hospitalist in Kirkland, WA, since he finished his training five years ago. His physician team has grown from two to 11 and from covering inpatients for 40 physicians to over 200, taking over more than 98 percent of the inpatient medicine service at a 240-bed hospital. This expansion has allowed him to move into the role of a full-time neurohospitalist, a position that he finds both gratifying and exciting.

"The reality is that hospitalists will soon be caring for these patients – with or without neurological consultations," he said. "Most (internal medicine) hospitalists," he explained, "have felt that they are poorly prepared to care for neurology patients as there is little neurology experience in most medicine training programs." In response, the So-

ciety of Hospital Medicine has formed a core curriculum task force (on which Dr. Likosky serves) to define what skills a hospitalist should have with inpatient stroke care as one of the key areas for discussion.

Dr. Likosky has observed that with hospitalists present, there seems to be a different threshold for calling consults, as physicians previously more hesitant to disturb neurologists at the office appear to be using his services more.

"Because I'm so available to my partners, they consult me much more frequently than they would a reluctant community neurologist. As a result, there have been many diagnoses made that otherwise wouldn't have come to light. Many of these patients never would have been seen by a neurologist as an outpatient either, given the time constraints of primary care physicians and backlogs at local neurology clinics."

ELIMINATING BACKLOGS

Alex T. Schneider, MD, one of the neurohospitalists who works in Dr. Rardin's community, noted that there is a three-to-four-month wait to see a neurologist in Asheville. "The neurologists were so

track when he decided to change careers. He has been working full-time as a neurohospitalist for the past year.

He believes that the new DRG assignment for acute stroke care with a thrombolytic agent will promote the role of neurohospitalists. (See box, "New DRG Could Help Improve Stroke Care.") "Until now hospitals lacked incentives to promote thrombolytic care at their facility, but now that there is financial reward, they will want to develop more programs, better processes, and ultimately better patient outcomes."

A self-proclaimed optimist with a healthy cynicism, Dr. Schneider reflected, "The new reimbursement will do more to get patients treated with tPA than any recent clinical trial!"

FINANCIAL INCENTIVES

And it is not just the neurohospitalists that may benefit. Hospitals that are healthier financially may, in turn, provide funds to pay for a stroke director or to reimburse community neurologists for call coverage. Marc R. Nuwer, MD, PhD, former Chair of the AAN Medical Economics and Management Subcommittee, said, "I think neurologists have

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busy that when the shortage in coverage arose, they were quite relieved that the hospital, which had previously shied away from hiring physicians, stepped in," he added.

Dr. Schneider, a fellowship-trained stroke specialist, was on an academic

been disadvantaged by the tPA situation. Most are unavailable to drop whatever we're doing to get to the ER in a very short time. How many of us are in a position to leave our outpatient schedule and go to the ER right away? It's been a big imposition. We have seen some community neurologists walk away from hospital practice. The failure to gain adequate reimbursement for acute 'drop-everything-now tPA call' has been a part of that. Meanwhile reimbursement only has been for the unit time spent itself, not the disruption in our schedules," Dr. Nuwer continued. "The AAN has pushed for an on-call stipend for neurologists to be available for such vascular neurology. In the absence of that, many neurologists have been avoiding this responsibility. I hope that this new DRG now spawns better hospital participation in the on-call stipend program," he added.

Dr. Schneider agreed. "Neurologists like Dr. Duff want to do the right thing for their patients but are struggling today to maintain an office practice. In our community and certainly others, some neurologists were so overburdened that they pulled out of call duty."

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NEW DRG COULD HELP IMPROVE STROKE CARE

A new DRG, 559, has been assigned for *Acute Ischemic Stroke with Use of Thrombolytic Agent*. Three neurologists were principally involved in this effort: Lawrence M. Brass, MD, Joseph P. Broderick, MD, and Walter J. Koroshetz, MD. Dr. Brass believes it is good for hospitals, neurologists, and most importantly, patients with stroke.

"Stroke care in this country is inadequate," Dr. Brass said. "Effective therapies are underutilized, ineffective therapies are overused, guideline-based therapies are misused. In addition there are too few resources to ensure that patients receive quality stroke care." Dr. Brass is hopeful that the new DRG (and associated reimbursement) will begin to address one of the foremost obstacles of acute stroke care. He said, "Thrombolytic therapy is only given to a small minority of patients who could potentially benefit. Many neurologists who have tried to put systems in place in the institutions have been frustrated by the fiscal reality of limited payments for acute stroke care. I believe the new DRG along with the new subspecialty of vascular neurology and stroke-center certification, will result in hospitals being forced to rethink acute stroke care. This may help escalate the trend of hospitals hiring full-time neurohospitalists. It may also result in hospitals paying neurologists to take call (as is done for other specialties)."

INVESTIGATORS & PATIENT GROUPS AGREE:

ROFECOXIB VERDICT COULD DAMPEN PROSPECTS FOR NEW DRUGS TO TREAT NEURODEGENERATIVE DISEASES

By Norra MacReady

ARTICLE IN BRIEF:

✓ Several leaders of clinical trial groups and patient advocates contend this summer's jury ruling against Merck for rofecoxib dangers – as well as other pharmaceutical company withdrawals of drugs for safety problems – may inhibit the pace for new drug applications, possibly slowing down the approval process for some neurodegenerative therapies.

This summer's jury verdict against Merck and its painkiller rofecoxib (Vioxx) is another setback for the pharmaceutical industry, which is still grappling with the fallout from the withdrawal of the fast-tracked multiple sclerosis therapy, natalizumab, after reported links to progressive multifocal leukoencephalopathy, and reports linking selective serotonin reuptake inhibitors with suicide in adolescents.

Some observers wonder if the public's jaundiced view of pharmaceutical companies will intensify and slow the pace of drug development and approval, depriving seriously ill patients – including those with neurological disorders like Parkinson disease – of poten-

tially beneficial medications.

In the Merck trial, which played out in Texas in July and August, the family of Robert Ernst alleged that he succumbed to a cardiac arrhythmia brought on by his eight-month use of rofecoxib. Mr. Ernst's widow and children claimed that Merck misrepresented the drug's dangers, while the company maintained that rofecoxib had never been associated with arrhythmias. The jury agreed with the plaintiffs and awarded them \$253 million, although that sum will be reduced because Texas law places a cap on punitive damages in civil cases.

The trial was the first of thousands of state, federal, and international actions Merck faces over rofecoxib, at a cost that could soar to as much as \$50 billion, according to some estimates.

UNINTENDED HUMAN COST

But there may be an unintended human cost as well. "When a person is injured in a trial because of neglect on the part of a sponsor, the sponsor must be held accountable," said Robin Elliott, Executive Director of the Parkinson's Disease Foundation. "But we need to remember that many thousands of people may be injured indirectly when trials of potential new treatments are delayed because companies have an unreasonable fear of litigation," he said.

Several leading clinical trials leaders agree with Mr. Elliott's assessment. "I



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think this [latest verdict] will have an impact on drug development," said Bernard Ravina, MD, Associate Professor of Neurology, and Director of the Movement and Inherited Neurological Disorders Clinic at the University of Rochester. "Hopefully, companies will read this to mean that serious safety concerns need to be dealt with directly

and openly, but they might read this to mean that any trend [of problems] seen during development could come back to bite them."

A TROUBLING HISTORY

Reports of problems had dogged rofecoxib and the other COX-2 inhibitors for several years before the onslaught of lawsuits. Studies published as early as 2000 showed that people who took rofecoxib or celecoxib (Celebrex, made by Pfizer), especially in high doses, had a higher risk of cardiovascular incidents than people on placebo. In 2001, in a review of the data on COX-2 inhibitors, a group from the Cleveland Clinic concluded that the evidence raised a "cautionary flag" about the cardiovascular side effects associated with these drugs (*JAMA* 2001;286:954-959). The following year, the Food and Drug Administration told Merck to publish a warning about the adverse effects possible when using rofecoxib. Merck finally yanked the drug on September 30, 2004, when evidence of those risks became incontrovertible.

After the trial, some jurors stated they were troubled by evidence that Merck had tried to minimize the problems by suppressing internal documents in which those risks were discussed. They also said drug labels often were confusing, and called for companies to

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IN PRACTICE

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COVERAGE FOR SICKER PATIENTS

But paradoxically, their resignations may have been the result of suddenly having to cover sicker patients because the neurohospitalists are not currently available around the clock, Dr. Rardin explained.

"It had long been the desire of neurosurgeons to distance themselves from the nonsurgical care of hemorrhages; since the arrival of the neurohospitalists, we have been asked to manage most of these cases," said Dr. Rardin.

"This has proven to be a significant challenge for those of us not used to the critical care issues," he continued. "Weekend call is much busier; typically

I assume management of a service of admits and consults numbering from five to 15 and deal with all the new admits or consults for the weekend, typically five to 10. This is a major change in workload for me; previously two groups were sharing the consult load. During the weekday, the hospitalists have a nurse practitioner who helps, and our plan is to also hire one to help during the weekend."

But Dr. Rardin has noted greater reimbursements for the time committed to being on call, and enjoys more exposure to interesting neurologic problems. He has also observed great improvement in patient satisfaction since office hours have expanded and there are no last minute physician cancellations.

Their hospital is now in the process of recruiting a third neurohospitalist and another nurse practitioner. Dr.

Schneider predicts that, in the future, neurologists will either be outpatient or inpatient doctors and those roles may extend to research, teaching graduate medical education, and other activities.

LESS PREDICTABILITY

He also welcomes questions and calls from outpatient physicians who just need occasional telephone advice. He loves his job and its varied responsibilities, but for those who are considering a career as a neurohospitalist, he warns there is less predictability in this choice than in clinic work.

"There are times when the hospital is quieter and for this model to work, the neurohospitalists will need to define roles that will support their salaries," Dr. Schneider said. But, when you are off, you are truly off and do not have to

worry about patient issues."

And what about the challenges of attending to complicated inpatient cases, which might require immediate and greater understanding of a patient's? The neurohospitalists interviewed here said that has not been a problem to date, with access to electronic medical records and the availability of the primary physicians for consults.

Dr. Likosky advised, "Neurologists seem to be yielding much of the inpatient care for a number of valid reasons, but this should be a conscious decision. It may be that the neurohospitalist model will be viable for medium to large hospitals. As a whole, I think that hospitalists are looking for neurologists to help partner in the care of these patients and with appropriate consultation and guideline development, great success may be achieved." ★