

SAVING OPHTHALMOLOGY'S ENDANGERED SUBSPECIALTIES

Some subspecialties operate under the radar and lack razzle-dazzle. But they are the guardians of highly specialized expertise and to let them quietly fade away would diminish all of ophthalmology.

BY MARIANNE DORAN, CONTRIBUTING WRITER

Your daughter calls you from college in the middle of the day with alarm in her voice. She is suddenly having frightening, involuntary eye movements in one eye. You're concerned about a central lesion and tell her she should get an immediate workup for monocular nystagmus. But you know for certain that the nearest neuro-ophthalmologist is two states and 900 miles away. After the phone conversation you mutter an unprintable version of "Where's a neuro-ophthalmologist when you need one?"

Don't say we didn't warn you! Leaders in neuro-ophthalmology—as well as in pediatric ophthalmology, uveitis care and ophthalmic pathology—have been sounding the alarm for years: Quietly and relentlessly, the professions they care about so passionately are dwindling as their members retire and fellowships go unfilled.

The root problem plagues all of medicine, not just ophthalmology: Disciplines that are intensively focused on patient encounters demand more physician time but are reimbursed significantly less than procedure-intensive disciplines. Consequently, MDs like pediatricians and family-care providers make but a fraction of what anesthesiologists, orthopedic and refractive surgeons make. And med school grads are voting with their feet.

Neuro's Disappearing Act

Neuro-ophthalmology has experienced the crisis of attrition most acutely, and its leaders were the first to call attention to the growing plight of ophthalmology's subspecialties. Larry P. Frohman, MD, professor of ophthalmology and neurosciences at the University of Medicine and Dentistry of New Jersey in Newark, has been a vocal advocate for increasing

awareness of the problem and for finding solutions that will maintain the viability of his profession.

"Much of the agitation about ophthalmic subspecialties has come from neuro-ophthalmology," said Dr. Frohman, a past president of the North American Neuro-Ophthalmology Society (NANOS). "But as we brought the issue up, it became clear that uveitis, pathology and pediatrics

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were also raising red flags about whether enough people would be entering these subspecialties and whether there would be enough people left to train future generations.”

The looming challenge for neuro-ophthalmology is that an estimated 10 to 14 new neuro-ophthalmologists are needed each year in the United States to replace those lost to attrition, but the number of ophthalmologists entering the profession averages only about five per year.

According to results of a survey of ophthalmology residents conducted by Andrew G. Lee, MD, chairman of ophthalmology at The Methodist Hospital in Houston, the reasons for this decline include lack of lucrative surgical procedures (31 percent), perceived lack of jobs (15 percent), difficulty of the specialty (12 percent), time involved in practicing the discipline (10 percent) and salary prospects (10 percent).¹

If only time were money. The time commitment required to conduct a thorough neuro-ophthalmic exam, coupled with lower financial reimbursements, no doubt looms large in many residents’ decisions regarding the subspecialty. “Neuro-ophthalmology is a highly cerebral, highly labor-intensive field,” noted James P. Dunn Jr., MD, director of the division of ocular immunology and director of residency education at Johns Hopkins University.

“You can’t quickly see a new neuro-ophthalmic patient in the way you can see a patient with a cataract or fairly quickly examine a patient with glaucoma because those conditions are limited to the eye and involve easily performed in-office imaging, not CTs or MRIs. Although it takes longer to evaluate neuro-ophthalmic patients, neuro-ophthalmologists are not commensurately reimbursed for these more involved workups. So you can imagine the financial disparity that results,” Dr. Dunn said.

“If you look at people who are in academic departments, many of us share expense allocations with people who make a lot more money and tend to consume more resources than we do.” —Dr. Frohman

Uveitis—No “Wow” Factor

Dr. Dunn added that a similar situation exists in uveitis. “The workups may not be quite as involved as those in neuro-ophthalmology, but you have many of the same types of problems—patients with complicated conditions, a lot of internal medicine and non-ophthalmic issues that come into play whether you are putting a patient on a complicated treatment with systemic risks. Or the condition itself has renal, hepatic, rheumatologic or cutaneous manifestations. Uveitis has a little more to offer surgically than neuro-ophthalmology does, but the disparity in income is always going to be significant.”

Dr. Dunn also noted that the endangered subspecialties often lack the “Wow!” factor that can make other fields seem more exciting. “Having a patient who is on potent and potentially toxic medications that may make their vision only a little better is hardly the same as taking a patch off five minutes after LASIK or cataract surgery and having the patient say, ‘Wow! I can see! This is wonderful!’ A lot of residents are understandably drawn to this.”

Kids (and Parents) Take Time

David Epley, MD, a pediatric ophthalmologist in private practice in Seattle, clearly chose pediatrics for reasons other than big bucks, but he understands the dilemma many residents face. “People look at the demographics of pediatric ophthalmology and at the average salary and at the issue of dealing with children every day and say, ‘I’m just going to choose cornea because I can make three times as much and I won’t ever have to see kids.’”

Like neuro-ophthalmology and uveitis, pediatric ophthalmology is extremely time-intensive. Young children can be frightened or uncooperative, requiring patience and careful handling to establish trust and elicit cooperation. Dr. Epley added that his patients’ parents typically ask two questions for every one question an adult patient would ask. Because of the extra time involved, a pediatric ophthalmologist may see 30 to 35 patients a day compared with the 60 or more patients an ophthalmologist with adult patients might see. Pediatric surgery is complicated as well, with virtually all procedures being performed under general anesthesia.



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According to Dr. Epley, pediatric ophthalmology is filling about three-quarters of its approximately 35 fellowship slots each year. "We're filling in the upper 20s pretty consistently, but we're definitely not filling all of them each year. As a result, there is a projected shortfall of pediatric ophthalmologists in the long term."

Kids needing an Eye M.D. might have to wait.

The Pacific Northwest is already experiencing the squeeze, with only 10 pediatric ophthalmologists in the entire state of Washington. "If you want to see a pediatric ophthalmologist, it's possible, but you may have a wait," Dr. Epley said. "In general, we really have to rely on general ophthalmologists and optometrists to see a lot of these kids because we just don't have the hours."

This shortage is one of the reasons pediatric ophthalmologists in Washington have voiced some objections about mandated vision screening in children despite screening's potential benefits. "We can't do it all—there just aren't enough of us. It's a big problem right now, and it's only going to get worse."

Pathology Still Kicking

Ocular pathology is also considered to be one of the endangered subspecialties, although David J. Wilson, MD, professor of ophthalmology and head of ophthalmic pathology at Oregon Health & Science University in Portland, has a different take on the issue.

"I don't really think of eye pathology as something that is dying or going away," he said. "It's always going to be there because it's really about the study of eye disease. Some people have developed a narrow view of eye pathology as people looking

at glass slides and biopsies. But it has always been a multidisciplinary study of eye disease, with a strong focus on education."

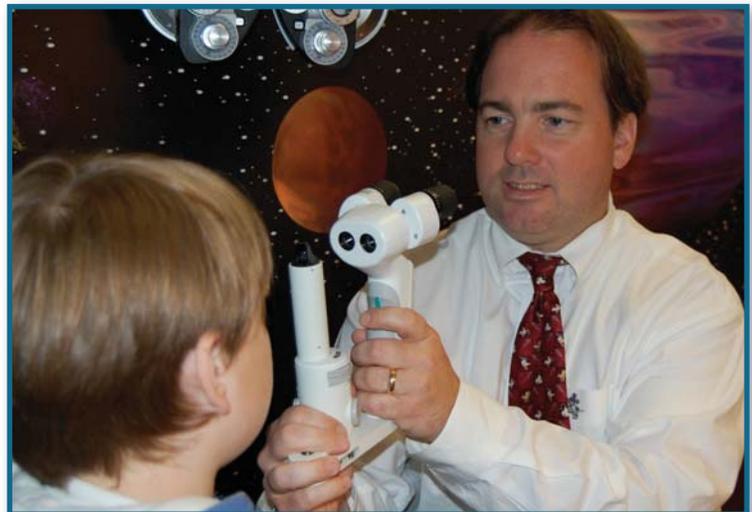
Dr. Wilson added that eye pathologists have traditionally played additional roles in ophthalmology. "Someone may have been a clinical specialist in another area or a general pathologist who had a special interest in eye pathology. I believe that model still exists today and will always exist because it plays an important role in research and in our training of residents. Eye pathology is never going to be a huge subspecialty—and it shouldn't be—because no one is going to go out into the community and practice eye pathology. It's always going to be part of training programs."

One solution—multitasking. Dr. Wilson noted that eye pathology combines very well with the field of ocular oncology and that several fellowships combining the two are now being offered. This idea of combining fellowships seems to be taking hold in other subspecialties as well (see "Increasing Marketability With Combined Training").

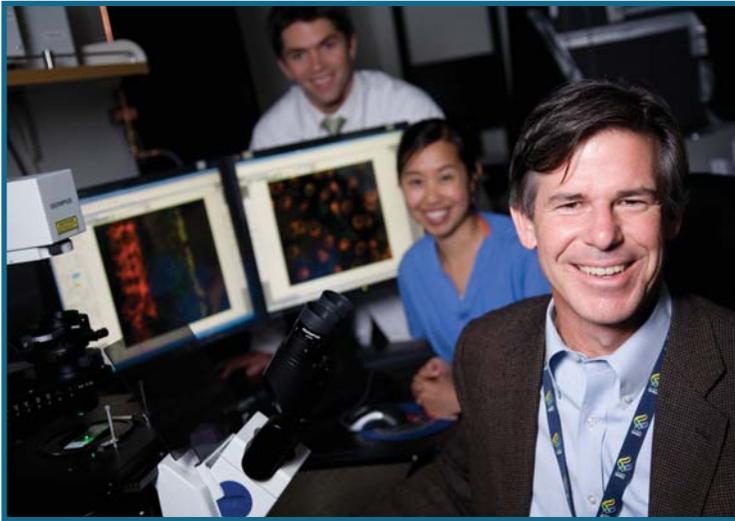
A Broken System of Compensation

Dr. Frohman has identified two factors within typical ophthalmology departments that contribute to low compensation for neuro-ophthalmologists and other beleaguered disciplines:²

- Nonprocedural encounters remain undervalued.



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- Efforts by physicians like neuro-ophthalmologists that benefit other medical specialists are often not factored into budget considerations.

Revenue stream is poorly measured. Productivity-based compensation in academic settings, Dr. Frohman said, discounts interdisciplinary efforts—which are increasing in many institutions—and it is often unappreciative of the generation of downstream revenue. With departments as islands unto themselves financially, a physician's interdisciplinary efforts may benefit another department and the institution as a whole but not

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garner any additional compensation or “credit” for the subspecialist's department.

Allocations not fairly distributed. Expense allocations compose another arena where endangered subspecialists get short shrift. They conserve more resources but tend to get charged the same as the guzzlers. “If you look at the subset of people who are in academic departments of ophthalmology, many of us share expense allocations with people who make a lot more money than we do and tend to consume more resources than we do,” Dr. Frohman pointed out.

Some endangered subspecialists worry that health care reform may compound these inequities or create new ones. “The problem is that our practice is in many ways similar to that of primary care physicians. But we have a very low volume and we are classified as specialists,” Dr. Frohman noted. “With all the debate over health care reform, most plans propose—with the assumption being that specialists do procedures that are overvalued—to take aggregate dollars from specialists and give

Increasing Marketability With Combined Training

One potential solution to the subspecialty crisis is to combine a fellowship in a subspecialty like neuro-ophthalmology with a fellowship in another field. “Oculoplastics surgery and neuro-ophthalmology are a natural fit because there is a lot of overlap between neuro-ophthalmology and the orbital diseases that an oculoplastics surgeon might manage,” said Dr. Dunn. “So some people have suggested a combined fellowship. This gets at some of neuro-ophthalmology's problems because it offers more surgery and has a high reimbursement.”

Dr. Dunn added that this type of arrangement is becoming common in uveitis, although on an informal level. “It seems as if the overwhelming number of people going into uveitis today are doing that in combination with a cornea/anterior segment fellowship or a retina fellowship,” he said. “This makes them more marketable in a lot of ways because any private practice or academic center that doesn't have a uveitis specialist is always delighted to have someone with uveitis training because most people don't want to manage patients with these diseases.”

The downside, of course, is that the person is

going to be doing two or three years of fellowship training, which is a significant commitment. “We don't do this at the formal level, but there are clearly some programs where you can work that out in the same institution,” Dr. Dunn said. “If someone comes to Johns Hopkins and is interested in doing both of these, we can talk with the retina people or the cornea people and work out a deal. We have done this before where we have taken someone for a uveitis fellowship with the expectation that they do that fellowship first and the cornea fellowship second, or they will do a retina fellowship first and the uveitis second. This has worked well in a few situations.”

In a post-fellowship reality, however, Dr. Frohman sees other pitfalls to combining skills. “When one individual is the departmental expert in two fields, it is more difficult to obtain and maintain the appropriate breadth of knowledge than it would be if that person only had to master one subspecialty. And unless the reimbursement system is fixed, people who intend to split their efforts 50/50 between a higher- and a lower-paying subspecialty may still end up allocating 80 percent of their effort to the higher-paying field.”

them to cognitive visits performed by primary care physicians. We run the risk of being penalized despite the fact that consultative neuro-ophthalmologists often have no or few procedures but are not able to reap the increased revenue allocated to primary care nonprocedural services.”

Don't Let Money Trump Passion

Financial concerns understandably enter into the decision-making process of many ophthalmology residents. But for some, money literally dictates their choices. “Today many of our residents are coming into training with enormous debt,” Dr. Dunn said. “They have gone to top universities and top medical schools, and it’s not at all uncommon for them to have \$150,000, \$250,000 or more in debt when they are in residency. I was fortunate to be in that last generation that could fairly reliably come out of training and make career choices based on what we wanted to do. I feel terrible for the residents in training now who might want to do a uveitis or neuro-ophthalmology fellowship. But when they are being hammered by these crushing debt burdens, it’s difficult to choose a field that is going to pay them maybe a quarter or a third of what they might make as a retina surgeon.”

Saving ophthalmology’s endangered subspecialties will require recognition of the problem by the government, by academic medicine and by professional advocacy organizations. In the meantime, ophthalmologists within these subspecialties are offering some creative solutions of their own to increase recruitment:

CAPTURE residents’ attention early. Dr. Epley believes that early exposure to a profession—perhaps even before residency—can dispel myths and preconceptions and demonstrate how rewarding a certain subspecialty can be. He noted that ophthalmologists who offer pediatric care are known to have greater job satisfaction than those in many other subspecialties, and he wants to get the word out about how enjoyable his job can be. His tongue-in-cheek pitch for pediatrics: “Here’s what we do and it’s actually fun—we spend all day playing with kids.”

MAKE that discipline more compelling. The endangered subspecialties are generally fields that are not emphasized in training, Dr. Dunn noted. “They can be complicated, and it’s easy for residents in training to feel a bit overwhelmed or uncomfortable in managing them.” In pediatrics, residents are often scared away by strabismus, Dr. Epley said. Strabismus is emphasized in training because general ophthalmologists need to know about it, but residents have a very short exposure to the condition and often find it intimidating. “We

are trying to make strabismus more friendly to the residents by de-emphasizing some of the most complicated aspects,” he said.

PROMOTE intellectual curiosity and pure enjoyment. “I’m not sure that we have done a good job of getting people interested in these conditions from a purely intellectual point of view—just the sheer enjoyment of managing complicated patients, coming up with a diagnosis and making them better,” Dr. Dunn said. “I love uveitis. I like the complexity of the disease and the range of treatments that are offered. I like the fact that there are lots of interesting studies involved and a lot of unanswered questions. It’s very intellectually stimulating, and I think any pediatric ophthalmologist or neuro-ophthalmologist would say the same thing about his or her field.”

What the Family of Ophthalmology Can Do

Dr. Dunn contends that in order for the endangered subspecialties to survive, academic departments of ophthalmology will have to step up and really make a commitment to the training of residents who express interest in the smaller disciplines.

“You have to look at this as a ‘loss leader’ as it were—you know you may lose money on the neuro-ophthalmology service, but you have to do it because if you are not going to provide teaching in neuro-ophthalmology or low vision or uveitis, you are doing a disservice to your residents and to your institution as a whole. Departments need to make a financial commitment to support those fields if they lose money. Ultimately, organized ophthalmology has to play a role in this. We can’t just leave it to NANOS or AAPOS,” said Dr. Dunn.

1 Frohman, L. P. *Ophthalmology* 2005;112(5):741–743.

2 Frohman, L. P. *J Neuro-Ophthalmol* 2008;28(3):231–234.

Meet the Experts

JAMES P. DUNN JR., MD Director of the division of ocular immunology and director of residency education at Johns Hopkins University in Baltimore.

K. DAVID EPLEY, MD Pediatric ophthalmologist in private practice in Seattle.

LARRY P. FROHMAN, MD Professor of ophthalmology and neurosciences at the University of Medicine and Dentistry of New Jersey in Newark.

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