

Advice For Incoming Second-Year Fellows

BY S. K. STEVEN HOUSTON III, MD

As the academic year winds down, second-year vitreoretinal surgery fellows around the country prepare to pass the torch to battle-tested first-year fellows. Programs differ across the country, but, at Wills Eye Hospital, our fellowship is primarily medical retina during the first year and heavily surgical retina during the second year. However, I hope that the advice that follows can enhance vitreoretinal fellows' experiences at any stage of the process.



—S. K. Steven Houston III, MD

My vitreoretinal fellowship has offered me a tremendous educational experience—in the clinic, in the OR, and it has even taught me some valuable life lessons. I would like to pay it forward, as it were, and I humbly offer some advice to soon-to-be second-year vitreoretinal fellows on surgery, medical retina, research, employment, and work-life balance.

SURGICAL ADVICE

Vitreoretinal surgery is much different from any other subspecialty in ophthalmology, and, although it often draws from surgical experience obtained in residency, it also requires a whole new skill set. Our surgeries involve anterior segment control such as trocar positioning, corneal and scleral wound placement, intraocular lens manipulations, and lensectomies. Many of these skills build on training in cataract surgery. However, most residency programs do not provide significant exposure to posterior segment surgeries, and those that do often permit residents only to assist or observe. As a result, when retina fellows finally get to the OR, there is an exponential learning curve that requires repetition and practice to overcome. During the first few months in the OR, the attendings I studied under used a graduated approach in order to teach the nuances of every step of vitreoretinal procedures, and I suspect it is similar in other training programs. A key point to remember in vitreoretinal surgery is the sequential nature of our procedures, so an error or misstep early in the procedure can quickly multiply. It is important to pay attention to these steps, however mundane they may seem. Always ask questions about

why something is done a certain way, as this will help you in the future as you create your own preferences and unique surgical approaches.

Write down surgical pearls and instructions and every question and observation in the OR, and try to record a video of every case. My recommendation is to buy a 2 terabyte external hard drive and make a habit of recording and archiving each and every case. Still, despite having 2 terabytes of video, you will not learn anything unless you edit video and review specific cases. Note cases that you performed and those that the attending performed. Critique your cases, trying to be as objective as possible while noting what you might do differently in the future. Also, review cases in which complications or mistakes occurred, and identify variables that may have contributed so that you can make sure they are minimized in the future. Keep a surgical journal with notes detailing each step of a surgery. I bring my laptop into the OR and quickly type into my surgical journal between cases for anything I want to remember later. I have found that if you wait until the end of a day or week, many of the specifics and details may be lost.

A final point to emphasize about the fellowship surgical experience is the importance of mastering your equipment. You must know the ins and outs of the equipment you use in surgery. Master the operating microscope and footpedal so that you can comfortably drive the scope. Prior to entering the OR, review setting up the vitrectomy platform from start to finish with your local industry representative. It is important to master the vitrectomy platform, footpedal control, and troubleshooting before starting cases. However, do not get too comfortable with only one surgical setup. During

training, it is important to learn new techniques, use a variety of vitrectomy machines and operating microscopes, try different forceps and other instruments, and use multiple contact lenses and wide-angle viewing systems. You may not be using the same equipment after you leave fellowship, so being comfortable with a range of equipment is beneficial.

MEDICAL RETINA

Medical retina is becoming increasingly important, with more and more pharmacologic agents being introduced, and it may, in fact, encompass the lion's share of your time in clinic after fellowship. Fellowship is the time to master the different treatment algorithms for neovascular age-related macular degeneration, retinal vein occlusions, and macular edema secondary to diabetic retinopathy. Probe your attendings on treatment decisions, particularly regarding when to treat, how to treat, intervals of follow-up, and when to stop treatment.

Several treatment protocols are backed by evidence in the literature, and the American Society of Retina Specialists's Preferences and Trends surveys provide guidance on current practices. However, I found that it was always interesting and informative to hear each attending's experience with a particular protocol. During your time as a fellow, you should form your personal preferences that you will use in practice.

Another important facet of fellowship training is reading the literature. If you think you are done, then you should read some more. You want to be well-versed in the clinical trials that have shaped the management of the diseases we treat. This will serve as an important foundation on which to build. Retina is a continually changing specialty, with new therapeutic options, treatment protocols, and surgical procedures and techniques emerging each year. As a result, to provide the best care for your patients, you must stay current with the literature and constantly assess your approach to disease management.

Similar to your methodology in the OR, you should keep a medical journal to organize and remember the subtleties of different approaches in medical retina. Also, keep an ongoing log of interesting cases, and download images from optical coherence tomography (OCT) scans and fluorescein angiograms to your external hard drive to have in the future for presentations and review. If you are fortunate to be in a program with access to new retina imaging technology, such as OCT angiography, swept-source OCT, or adaptive optics, use your second year of fellowship to learn as much as possible about these imaging modalities and how to interpret these images. These new imaging techniques may be utilized

routinely in the future, and using your second year of fellowship wisely can put you ahead of the game.

RESEARCH

Do not be the fellow who hits autopilot halfway through the second year. Take advantage of light OR days to finish research projects that were instituted during your first year. Also, do not hesitate to start new projects that may be taken over by the incoming fellows after your departure from fellowship. This allows for a nice bridge of projects to carry over into your first few years of practice and a steady stream of publications and presentations while you get other projects started at your new practice.

Several of my research mentors suggested not to let projects dry up upon starting your practice. Once you are away from research and publishing, it is very difficult to start again, especially as your clinical practice builds.

Finally, do not be the fellow who completes fellowship and leaves projects incomplete or fails to write and submit a paper outlining research findings. Such behavior shows a lack of commitment and may negatively impact your professional reputation.

JOB SEARCH

If you did not start your job search during your first year of fellowship, now is the time to start. For information on the job search, please see the previous *Retina Today* Fellows' Focus article, "Navigating the Job Search," from the October 2014 issue.

LIFE

Although vitreoretinal surgery fellowship can be very busy as we juggle clinical and surgical duties, educational reading, research, and video editing and review, make sure not to neglect your physical and mental health and your family. Be sure to exercise, read, relax, and spend time with your family. Ultimately, your well-being and work-life balance will allow you to be the best possible fellow, researcher, spouse, and parent. We are lucky to be part of an amazing field of medicine—enjoy it! ■

S. K. Steven Houston III, MD; Ehsan Rahimy, MD; and David Reed, MD, are second-year vitreoretinal fellows at Wills Eye Hospital in Philadelphia, Pennsylvania, and are members of the Retina Today Editorial Board. Dr. Houston may be reached at shouston3@gmail.com. Dr. Rahimy may be reached at erahimy@gmail.com. Dr. Reed may be reached at davidreed43@gmail.com.

