

ADAPTING TO MODERN RESIDENTS AND FELLOWS

The current state of glaucoma education at one eye institute.

BY ROHIT VARMA, MD, MPH, AND ALENA REZNIK, MD



I (A.R.) am a representative of the technology-wise cohort born between 1980 and 2000 that uses Twitter, Instagram, and other services so that we are always connected. My generation has a wealth of knowledge—sometimes an overwhelming amount—at our fingertips.

As an attending physician, my goal now is to learn how to adapt to new changes for my own learning and how to teach the generations to come. Hours of lectures are becoming a thing of the past, and at present, the interactive format is welcome at major universities.

This article summarizes USC Roski Eye Institute's approach to glaucoma education.

CURRICULUM

We routinely use resources from the American Academy of Ophthalmology: Basic and Clinical Science Course to outline our curriculum (chapter by chapter), the ONE Network for monthly assessments, and The Resident Hub for self-directed learning. All are available on iPads (Apple) that our university provides to residents. A 6-week block is dedicated to teaching residents about glaucoma in a classroom format, and it is repeated annually. This period includes 5 hours each Friday morning for the duration of the block, and it incorporates lectures and wet labs. This time is protected from any clinical duties except emergency services.

VIDEO TO REINVENT EDUCATION

We have moved away from lecture-based learning, at least partially. The inspiration came from Wallace Alward, MD, at University of Iowa Carver College of Medicine, and Sal Khan, entrepreneur and founder of Khan Academy online modules to learn math. Their approach is to videotape short lectures on a subject and have them available for viewing at any time.

At first, this approach was counterintuitive for me. Why would residents prefer video lectures instead of live lectures? I asked for feedback from the residents, and the most common answers were convenience and the ability to pause/

repeat. "No embarrassment factor" was high on the list as well.

Last year, we incorporated glaucoma lectures from Dr. Alward. Fifty lectures are available at curriculum.iowa-glaucoma.org. They average 15 minutes in length (4-37 minutes), and they include 900 images and more than 90 video clips. The total length is under 12 hours. A companion iBook (Apple) is available as well that we encourage our residents to download. Residents watch lectures while following a checklist prior to sessions. The attending physician assigned to the discussion is responsible for collecting cases appropriate for the topic. I have enjoyed the lectures tremendously and have watched them more than twice. This approach has "flipped" the classroom into residents' living rooms and freed up time for more interactive and interesting discussions and wet labs.

HANDS-ON TRAINING

Our goal is to expose residents to glaucoma specialty clinical service for 6 weeks per year for 3 years. Repetition is a key factor. During this time, residents are asked to master

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LESSONS FROM A MILLENNIAL

BY ALENA REZNIK, MD

Being a part of the millennial generation has taught me a few things:

- Text. Do not call.
- Eyetube.net videos are always there in a pinch.
- Books are easier to carry on my iPad (Apple).

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AT A GLANCE

- Hours of lectures are becoming a thing of the past, and at present, the interactive format is welcome at major universities.
- Instead of live lectures, universities are making short videotaped lectures on a subject available for residents and fellows to view at any time.
- Hands-on training in wet labs is a major part of residency.

applanation, gonioscopy, and optic nerve biomicroscopy skills. They are required to watch and discuss videos housed at gonioscopy.org—a beautiful virtual atlas of videos and pictures from Dr. Alward and his team—and then their acumen is tested on patients in clinic. Trainees also perform serial applanation tonometry that is checked by an attending physician or a head technician. During the rotation, trainees have an opportunity to perform visual field testing and optical coherence tomography on themselves and to practice on others.

CONTINUITY OF CARE

Because glaucoma is a chronic disease, continuity of care is critical. USC Roski Eye Institute has established a

glaucoma service headed by residents, where they see patients with a glaucoma attending physician, make decisions on treatment, and refer patients for further surgical/laser intervention.

SURGICAL TRAINING

During the third year of training, senior residents have an opportunity to run a glaucoma service in their clinic and to perform glaucoma surgeries under careful and constant supervision by a faculty member. The learning is enhanced by wet labs, USC Roski Eye Institute's video library, and Eyetube.net videos.

CONCLUSION

With the wealth of knowledge available online, our goal is to facilitate learning, provide direction, and increase residents' and fellows' interest in the subject. Interactive learning is a preferred method now, and we are adapting to this approach of relaying and teaching new information. ■

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