Training residents for success

by Maxine Lipner, Contributing Writer

Spending time in a wet lab getting hands-on experience is perceived as valuable by residents for building confidence.
Source: Shameema Sikder, MD

Which methods help most

Everyone wants residents to be as prepared as possible to perform cataract procedures, but are there certain training methods that may be perceived by residents as more useful than others? That's what investigators set out to determine, according to **Shameema Sikder, MD**, assistant professor of ophthalmology, Johns Hopkins University School of Medicine, Baltimore. The study was published in the *Journal of Cataract & Refractive Surgery*.[1]

Investigators wanted to hone in on the latest technology and its role in resident education. "At Johns Hopkins, we have an interest in surgical education and how we can use technology to promote surgical competency and create the best surgeons," Dr. Sikder said. "But the real driving factor for this paper was the fact that there are so many different tools available to help residents prepare."

As part of the study, a survey was sent to all ophthalmology residency programs within the U.S. "We had a total of 116 residents who completed the survey," Dr. Sikder said, adding that investigators asked about an array of tools, from simple steps such as reviewing the charts in preparation for surgery or having a traditional didactic lecture to spending time in the wet lab and using pricey surgical simulators.

Surprisingly, use of state-of-the-art technology did not necessarily translate into the greatest sense of preparedness. "The surgical simulator, which is often the most expensive tool that we have on the market, didn't uniformly equate to a sense of preparedness," Dr. Sikder said. "Certainly, the surgical simulator was found to be helpful, but it wasn't a case that if you had one you could sit your resident in front of it and hope that the resident would be competent by the end of the simulation use."

Instead, it was hands-on supervision from a more experienced practitioner that proved to have the

greatest impact. "What we found was that supervising practice, whether with an attending surgeon or a more senior resident helping the trainee to get experience on an animal or synthetic eye, is often the most statistically significant parameter in a resident's perception of educational value," Dr. Sikder said. She added that a small program without a ton of resources doesn't have to spend a lot of money on a surgical simulator as this is not the only tool that will build residents' confidence.

Another resource that had a great impact was spending time with residents. "Having an attending or a more senior resident going through several steps was perceived to be very valuable in the resident's education," Dr. Sikder said. "I think this is a critical learning point because it means that at the end of surgery, they may be needing a little practice while you're in the OR." All you need is access to a microscope to go over some of these critical steps for cataract surgery, Dr. Sikder stressed.

Investigators also considered the specific steps within cataract surgery and the impact of various training methods. "The higher-yield interventions were using a surgical simulator or having a detailed discussion with a senior surgeon or processing in a wet lab," Dr. Sikder said. When it comes to making a capsulorhexis, which is something that residents often find stressful, this is an area where having a surgical simulator can be helpful, but practicing this step with a senior surgeon can likewise improve confidence, Dr. Sikder noted.

She was surprised that a relatively simple intervention such as a discussion could have such a profound effect; this was contrary to her impression that residents tend to want hands-on experience. "I found it refreshing that a detailed discussion with a senior surgeon was considered so valuable," she said.

Meanwhile, taking a more passive tack left residents feeling less ready. "The data showed that a more passive approach of lecturing and showing videos isn't sufficient anymore to prepare residents," Dr. Sikder said, adding that more clinical experience, whether it be real or virtual, is critically important.

Dr. Sikder hopes practitioners come away from the study with the realization that with a little imagination, there are various effective options for training residents. "I think the take-home message is you have to use the different tools that are available in a creative way to help residents master surgical skills," she said.

Dr. Sikder views this as an exciting time to be focusing on resident education with new methods now available. "The reality is that once upon a time the adage, at least at Hopkins, was, 'See one, do one, teach one,' and times are changing; patients are savvier," she said. "They are aware that there are resident surgeons and attending surgeons and they want to know who is doing their surgery and how competent they are. The burden is on us to produce the best surgeons as quickly and as efficiently as possible." **OB**

Reference

1. Puri S, et al. Assessment of resident training and preparedness for cataract surgery. *J Cataract Refract Surg*. 2017;43:364–368.

Editors' note: Dr. Sikder has no financial interests related to her comments.

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