

Pearls for Creating a Quality Surgical Video

A well-made video can be a powerful learning tool.

BY SUMIT "SAM" GARG, MD

Welcome to the first edition of CRST's "Residents and Fellows" column. This column will cover topics of interest to young ophthalmologists in training. Our goal is to provide relevant information specific to the challenges and experiences that young surgeons encounter and to help them prepare for the future. In this inaugural edition, I discuss pearls for creating quality surgical videos, a skill that ultimately helps surgeons in training become familiar with and improve their surgical technique.

I hope you enjoy this installment of "Residents and Fellows," and I extend an invitation to readers to submit topics for publication.

—Sumit "Sam" Garg, MD, section editor

Honing the skill of recording and editing surgical videos is essential to young physicians' training. Through video, residents and fellows can improve their surgical technique. For example, the surgeon can examine what his or her nondominant hand was doing while trying to obtain a peripheral piece of nucleus, study his or her movements to minimize unnecessary actions, or figure out why the capsule broke. Video also serves as a powerful teaching aid, a vehicle through which residents and fellows can demonstrate what they have learned to one another. Furthermore, a well-edited video can make the difference between a good presentation and an outstanding one at conferences. This article offers pearls for creating a quality surgical video.

No. 1. IDENTIFY THE PURPOSE OF THE VIDEO

Know the goal of your video, and record and edit it with that specific goal in mind. For example, if you are presenting at a conference on phacoemulsification, a video that shows the creation of the main incision, paracentesis, and capsulorhexis is likely to lose the audience's attention. If the goal of the video is to study your surgical technique, then capturing these elements of the surgery makes sense. If teaching is the aim, be sure the video focuses specifically on the aspects of phacoemulsification that you want to discuss. If your video includes footage unrelated to the material that you are discussing, you

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can edit it to speed through those parts. Similarly, you can slow down the video to highlight a surgical maneuver or emphasize a point.

No. 2. LEARN HOW TO CENTER AND ACCOMMODATE WITH THE MICROSCOPE

The field of view is smaller on the video than it is through the surgical microscope. Young surgeons tend to overaccommodate, causing the video to be out of focus. This generally happens when the surgeon zooms in too much or looks down to focus with his or her own eyes versus through the microscope. To minimize this error, your initial focus should be at the iris plane, then use the microscope foot pedal to focus up and down. Some surgeons advocate gazing across the room in between surgical steps to allow their eyes to relax their accommodative effort before returning to the microscope or dialing in a little minus into the oculars. It is also helpful to rely on staff to inform you when the video is out of focus or not centered.

No. 3. KEEP IT SHORT

Do not belabor aspects that are inessential to the goal of your video. A video's length will depend on its purpose, but in general, 3 to 4 minutes is appropriate. This amount of time is long enough to convey a message and short enough to hold the audience's attention.

No. 4. UNDERSTAND FORMATTING

When capturing a video, make sure you know how to use the recording system and in which format it records. These factors will influence how the video is created and edited. If, for instance, you are using H.264 video, make sure the editing program accepts that format. Converting video to a different format for editing will degrade the resolution. Ophthalmologists use video to demonstrate microsurgery; a grainy video will compromise the surgery's elegance.

No. 5. SIMPLIFY STYLISTIC ELEMENTS

Stylistic elements that may enhance the quality of a video include titles, voiceover, and music. It is most effective to keep stylistic enhancements simple, so as not to distract the viewer from the purpose of your video. When recording a voiceover, be sure to be in a quiet room and speak clearly and slowly.

No. 6. BE AN EFFECTIVE COMMUNICATOR

When presenting at a conference, it is effective to split up the video into different parts that coincide with the material being discussed. For example, you might use part of a video to demonstrate the use of the chopper for creating the first chop followed by a slide with some pearls. Continue the presentation in this fashion, alternating between video and slides. This approach is likely to hold the audience's attention as well as allow you to communicate in a methodical, organized, and effective manner. ■

Section Editor Sumit "Sam" Garg, MD, is the medical director, vice chair of clinical ophthalmology, and an assistant professor of ophthalmology at the Gavin Herbert Eye Institute at the University of California, Irvine, School of Medicine. He also serves on the ASCRS Young Physicians and Residents Clinical Committee and is involved in residents' and fellows' education. Dr. Garg may be reached at gargs@uci.edu.



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