

Apps in ophthalmology

by Enette Ngoei Contributing Editor

ASCRS members' top 5 apps for ophthalmologists



The ubiquitous phrase “There’s an app for that,” trademarked by Apple, now sounds cliché, but it reflects a certain reality in a digitized world. In ophthalmology, smartphone apps have become part and parcel of daily practice for many physicians.

A survey conducted by *EyeWorld* asked ASCRS members to list their favorite medical or ophthalmology apps. The ones mentioned most fre-

quently were Eye Handbook, Epocrates, Medscape, Dragon Dictation, and Sight Selector.

Helpful apps

The Eye Handbook, a specialized resource for ophthalmologists, with its testing tools, eye atlas, physician reference area, calculators, coding help, and more, covers the widest range of functions and had the most mentions in the survey.

“It’s kind of like a one-stop shop,” said **Vinay A. Shah, M.D.**,

Kresge Eye Institute, Detroit, and co-founder, Cloud Nine Development, maker of the Eye Handbook.

The functionality that is used the most is the testing tools section, which includes everything from visual acuity testing to color vision testing to the Amsler grid, he said.

While its popularity is mostly among the younger ophthalmologists, namely residents and fellows, it’s becoming more widely used by specialists and general ophthalmologists, Dr. Shah said.

Not strictly an ophthalmology app, Epocrates was also very popular among participants in the survey. The app provides quick access to drug, disease, and diagnostic information at the point of care.

Rahul T. Pandit, M.D., medical director, Methodist Hospital Ophthalmology OR, Houston, said Epocrates is very well organized. A quick search can be done immediately from the homepage, and underneath all the drugs is the potential information you might want for it, he said.

Yannis M. Paulus, M.D., Byers Eye Institute at Stanford, Stanford University, Palo Alto, Calif., said he finds Epocrates useful when he's thinking of giving a patient an oral medicine or systemic medicines and wants to find out about dosing for those that he doesn't use that frequently in ophthalmology. He uses it especially if he's interested in drug-drug interactions. A similar app that he also uses for looking up drug information is Lexicomp, he said.

Another app that's not strictly for ophthalmology but is well liked by survey participants is the Medscape app from WebMD. Among the many features it includes are medical news, clinical references, and continuing medical education. Users can also listen to podcasts while on the go.

The general use Dragon Dictation app is also popular among participants. It's a voice recognition application that instantly transcribes whatever you say into text or email messages. According to its description on iTunes, it's up to five times faster than typing on the keyboard.

The Sight Selector app is popular for its ability to demonstrate various eye diseases, conditions, and treatments to patients. Dr. Shah said, "I have used Sight Selector videos on my personalized app, and my patients love it."

Room for more

While many apps are useful to ophthalmologists, Dr. Pandit said he hasn't found any apps specific to ophthalmology that are useful right now. The only app he's downloaded for specialty is the Eye Handbook, which he sees as useful for his practice's residents, but he finds it is not organized as well as he would like it to be, he said.

"An app similar to [Epocrates] would be great for ophthalmology

whereby you could search for anything from the homepage, whether it's a CPT code, a diagnosis, and/or treatment," he said.

He explained: "If you have someone who comes in with a red eye, what's the differential? What are the CPT codes associated with it? The ICD-9s? That kind of interlinked integrated information would be much more helpful than the way it is in the Eye Handbook, which is broken down into codes, AAO pre-

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Now Playing!

Keeping up with the latest in EyeWorld educational coverage

L eading experts in ophthalmology are constantly working on the best tools and techniques in surgery to obtain optimum outcomes with the highest safety standards. Finding the best ways to navigate complicated cases is part and parcel of their everyday practice.

As dedicated ophthalmologists everywhere endeavor to keep up with these constant developments, despite their busy schedules, *EyeWorld* is committed to providing comprehensive coverage of new techniques, tools, and complicated case management in a convenient way.

Through *EyeWorld* rePlay, an online library of videos, physicians can easily access monthly videos from *EyeWorld's* monthly "Complicated cataract cases" and "Tools & techniques" columns, as well as videos from various *EyeWorld* educational events.

The videos cover a wide variety of surgical challenges. For example, surgeons can learn techniques such as "Scleral Fixation Without Conjunctival Dissection" demonstrated by **Richard S. Hoffman, M.D.**, in a video that was submitted to the 2008 ASCRS Film Festival competition and won first place in the New Techniques category.

Another Film Festival winner that's available for viewing at any time is the video demonstrating options for treating a partially subluxed one-piece IOL that was causing recurrent vitreous hemorrhages, submitted by Dr. Hoffman. This won first place at the 2010 ASCRS Film Festival competition in the In-House Production category.

Surgeons dealing with glaucoma patients might be interested in a video where Dr. Hoffman demonstrates his technique for minimally invasive EX-PRESS Glaucoma Filtration Device (Alcon, Fort Worth, Texas) implantation without conjunctival dissection.

Corneal surgeons may be interested in a video where **Massimo Busin, M.D.**, demonstrates his ultra-thin DSAEK technique.

Anterior segment surgeons may find a video useful where **Lisa Arbisser, M.D.**, demonstrates an incredibly valuable systematic approach for successfully conquering vitreous.

Those dealing with patients who've had radial keratotomy may like to watch the video where **Mark Packer, M.D.**, describes his technique for performing phacoemulsification after radial keratotomy.

ASCRS MediaCenter

AMERICAN SOCIETY OF CATARACT AND REFRACTIVE SURGERY

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With the ASCRS•ASOA Symposium & Congress growing ever larger, attending every session of interest to the ophthalmologist has become difficult. Enter the ASCRS MediaCenter.

Essentially an online library of extensive educational content that is constantly being updated throughout the course of the year, the ASCRS MediaCenter allows physicians to catch up on presentations they missed at ASCRS meetings, revisit those that were of significant interest, or even take a peak at what's in store at upcoming meetings. This includes not only the Annual Meeting but also Winter Update and many of the *EyeWorld* educational events that take place in conjunction with these meetings. Practice management information provided by ASOA will also be available.

Accessed through the ASCRS website, members only need to log in and click on the MediaCenter tab at the top of the page before easily searching for papers, symposia, podcasts, films, webinars, posters, and more by clinical topic, speaker, meeting, media type, and/or key word.

While watching videos, members can bookmark and take notes that will be saved in their personal profile. The MediaCenter also includes a social media aspect, offering members the ability to share content they find particularly helpful on Facebook, LinkedIn, and Twitter.

The MediaCenter is but one aspect of ASCRS' growing portfolio of digital services. ASCRS' *Journal of Cataract & Refractive Surgery* and *EyeWorld* magazine are fully available online, along with eyeConnect's live question and answer discussion forums.

By digitizing ASCRS' multitude of educational offerings, the ASCRS MediaCenter enhances members' learning experiences with the convenience of online access, anytime, anywhere.



which isn't urgent, or is it endophthalmitis? If they took a picture, I could probably tell pretty readily," he said.

Along the same lines, Dr. Shah said, once apps are monitored and secure enough, they could even allow telemedicine and patient consultation or consultation with other physicians.

With the iPad 3 and its high-resolution screen, faster processor, and ability to connect to the internet faster using the 4G LTE, Dr. Shah said one area he feels apps will see a development in is the ability to connect more efficiently with electronic health records. At present, there is at least one app that allows access to EHR, the drchrono EHR app.

He also sees companies developing apps that have the ability to access image management software.

"I think technology is transforming the way we practice ophthalmology. I think smartphones are something that everyone has on them all the time, and I feel like there's a lot more that people can do to bring clinical utility to the market, so hopefully we'll be seeing [ophthalmology apps] more and more," Dr. Paulus said. **OB**

Editors' note: Dr. Shah has financial interests with Cloud Nine. Drs. Pandit and Paulus have no financial interests related to their comments.

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ferred practice patterns ... it would be nice if it was all coordinated together."

As far as other types of apps that haven't been developed that physicians are interested in, Dr. Paulus said, "From a research perspective, a lot of people are saying how smartphones could be useful for doing [virtual] glaucoma screening, vision screening, and things like that."

He explained that he often gets

calls from patients at home with various complaints, and if they could take a picture of their eye and send it over their phone so that he can take a look when he's talking to them, it would be incredibly helpful.

"Ophthalmology is obviously a very visual field, and I think [it would be helpful] if I could see exactly what they're talking about when they have post-op redness—is it subconjunctival hemorrhage,



Selected app of the month

What app do you find most useful?

Mag Light by Groove Systems Inc.

(itunes.apple.com/us/app/mag-light/id424219141?mt=8)

What is it? An adjustable magnifier and light in one

Benefits: It's great to read menus in a restaurant and do a quick ocular inspection when there is no slit lamp available.

Cary M. Silverman, M.D., medical director, EyeCare 20/20, East Hanover, N.J.