# Professional Life and the Smartphone

# BY ELIZABETH A. DAVIS, MD; JOHN A. HOVANESIAN, MD; JAMES A. KATZ, MD; MANUS C. KRAFF, MD; AND WILLIAM B. TRATTLER, MD

A recent ASCRS survey about members' use of smartphones indicated that approximately 83% of members, domestic as well as international, currently use a smartphone or other Web-enabled device. How have these technological platforms changed the way you handle certain aspects of your professional responsibilities? What features do you use and like the most?

# **ELIZABETH A. DAVIS, MD**

I have an iPhone (Apple, Inc., Cupertino, CA). I appreciate the benefits it affords me professionally. I use my phone most often for e-mail and texting to correspond quickly and efficiently with my colleagues, partners, office staff, industry professionals, friends, and family. I also research medical topics and access online journals. I can view my appointment calendar, which is invaluable. The phone reminds me of when and where I need to be, particularly at busy meetings like the ASCRS and AAO. On a personal note, I use the iPhone as my alarm clock, to listen to music downloaded from iTunes as well as identify songs with the Shazam application, monitor the weather, follow the stock market, read the daily news, make dinner reservations, view movie listings and locations, and get driving directions.

## JOHN A. HOVANESIAN, MD

Smartphone technology has broken barriers in communicating with other doctors. For urgent matters, we can contact each other directly on our mobile phones instead of calling the office landline and reaching a receptionist. For quick communication, we can send short message service (SMS) messages, causing only a minor interruption for the recipient. When dictating letters in the exam lane, I can look up a referring doctor's address and fax information quickly on the mobile Web. I have also found the instant availability of drug information through phone applications like Epocrates to be useful.

# JAMES A. KATZ, MD

My smartphone is a miniature computer that also makes phone calls. The convenience of communicating by e-mail or text, from any location, has shortened the time required to access or share information. Staff announcements are readily available, and colleagues can be contacted directly by cell phone or text, rather than be paged by the receptionist. I use the calendar program to update my schedule regularly, which is automatically synced to my computer and is always available to me. I constantly refer to applications such as Medscape and Epocrates to immediately obtain drug information.

# MANUS C. KRAFF, MD

The iPad (Apple, Inc.) is a new device that is capturing everyone's imagination. I was fortunate to preorder an iPad and receive my first one (I now own six) on Apple's initial day of delivery. At first, the iPad was just a new toy, but as I became more familiar with the device, I realized that a person is only limited by his or her imagination and creativity when using it. I use my iPads at home to control practically everything—the television, lights, thermostat, opening and closing the shades, and the movie library.

I also use the iPad in the office because it is a fantastic educational tool. I downloaded several surgical procedures that I recorded with a point-and-shoot camera to the iPad. The quality of the surgical videos is excellent, as is the audio. The videos last 7 to 8 minutes. They are usually unedited with excellent quality. I have also downloaded interviews I conducted with patients postoperatively. During a consultation with new patients, I leave the room while they view the interviews on the iPad. When I return, the patient understands the issues involved and can ask pointed questions. It will soon be possible to create a presentation for a meeting using the iPad. What a toy!

# WILLIAM B. TRATTLER, MD

Technology has increased my efficiency in my practice. One of my favorite recent purchases is the Verizon MiFi (Verizon, New York, NY), which is a wireless network that allows up to five mobile devices to connect to the Internet. Now, I can connect to the Internet with my laptop when traveling, and other family members can connect with an iPad or an additional laptop. I use the iPhone to stay up to date with my e-mails and to view documents or photographs posted on Kera-net or the ASCRS cataract and refractive e-mail discussion groups.

I also use text messaging with my staff. For example, when I am at my surgery center, I communicate with my technicians or study coordinator via text messaging. I expect that our practice will eventually adopt electronic medical records, so I will use mobile technology to view patients' records or e-prescribe. This means, to truly take a vacation. I will have to travel to a remote location where wireless networks are not available.

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22 CATARACT & REFRACTIVE SURGERY TODAY SEPTEMBER 2010

# (nepafenac ophthalmic suspension) 0.1%

#### INDICATIONS AND USAGE

NEVANAC® ophthalmic suspension is indicated for the treatment of pain and inflammation associated with cataract surgery

#### CONTRAINDICATIONS

NEVANAC® ophthalmic suspension is contraindicated in patients with previously demonstrated hypersensitivity to any of the ingredients in the formulation or to other NSAIDs.

#### WARNINGS

There is the potential for cross-sensitivity to acetylsalicylic acid, phenylacetic acid derivatives, and other nonsteroidal anti-inflammatory agents. Therefore, caution should be used when treating individuals who have previously exhibited sensitivities to these drugs.

With some nonsteroidal anti-inflammatory drugs including NEVANAC®, there exists the potential for increased bleeding time due to interference with thrombocyte aggregation. There have been reports that ocularly applied nonsteroidal anti-inflammatory drugs may cause increased bleeding of ocular tissues (including hyphemas) in conjunction with ocular surgery.

#### PRECAUTIONS

eneral: Topical nonsteroidal anti-inflammatory drugs (NSAIDs) including NEVANAC®, may slow or dela healing. Topical corticosteroids are also known to slow or delay healing. Concomitant use of topical NSAIDs and topical steroids may increase the potential for healing problems.

Use of topical NSAIDs may result in keratitis. In some susceptible patients, continued use of topical NSAIDs may result in epithelial breakdown, comeal thinning, comeal erosion, comeal ulceration or corneal perforation. These events may be sight threatening. Patients with evidence of corneal epithelial breakdown should immediately discontinue use of topical NSAIDs including NEVANAC® and should be closely monitored for corneal health.

Postmarketing experience with topical NSAIDs suggests that patients with complicated ocular surgeries, corneal denervation, corneal epithelial defects, diabetes mellitus, ocular surface diseases (e.g., dry eye syndrome), rheumatoid arthritis, or repeat ocular surgeries within a short period of time may be at increased risk for corneal adverse events which may become sight threatening. Topical NSAIDs should be used with caution in these patients. Postmarketing experience with topical NSAIDs also suggests that use more than 1 day prior to surgery or use

beyond 14 days post surgery may increase patient risk for occurrence and severity of corneal adverse events. It is recommended that NEVANAC® ophthalmic suspension be used with caution in patients with known

bleeding tendencies or who are receiving other medications which may prolong bleeding time. Information for Patients: NEVANAC® ophthalmic suspension should not be administered while wearing

contact lenses Carcinogenesis, Mutagenesis, Impairment of Fertility: Nepafenac has not been evaluated in long-term

carcinogenicity studies. Increased chromosomal aberrations were observed in Chinese hamster ovary cells exposed in vitro to nepafenac suspension. Nepafenac was not mutagenic in the Ames assav or in the moust lymphoma forward mutation assay. Oral doses up to 5,000 mg/kg did not result in an increase in the formation of micronucleated polychromatic erythrocytes in vivo in the mouse micronucleus assay in the bone marrow of mice.

Nepafenac did not impair fertility when administered orally to male and female rats at 3 mg/kg (approximately 90 and 380 times the plasma exposure to the parent drug, nepafenac, and the active metabolite, amfenac, respectively, at the recommended human topical ophthalmic dose).

### Pregnancy: Teratogenic Effects.

Pregnancy Category C: Reproduction studies performed with nepafenac in rabbits and rats at oral doses up to 10 /kg/day have revealed no evidence of teratogenicity due to nepafenac, despite the induction of maternal toxicity. At this dose, the animal plasma exposure to nepafenac and amfenac was approximately 260 and 2400 times human plasma exposure at the recommended human topical ophthalmic dose for rats and 80 and 680 time human plasma exposure for rabbits, respectively. In rats, maternally toxic doses ≥10 mg/kg were associated with dystocia, increased postimplantation loss, reduced fetal weights and growth, and reduced fetal survival.

Nepafenac has been shown to cross the placental barrier in rats. There are no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, NEVANAC® should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus. Non-teratogenic Effects: Because of the known effects of prostaglandin biosynthesis inhibiting drugs on the fetal cardiovascular system (closure of the ductus arteriosus), the use of NEVANAC® ophthalmic suspension during late pregnancy should be avoided.

Nursing Mothers: NEVANAC® ophthalmic suspension is excreted in the milk of pregnant rats. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when NEVANAC® ophthalmic suspension is administered to a nursing woman Pediatric Use: The safety and effectiveness of NEVANAC® in pediatric patients below the age of 10 years have not been established

Geriatric Use: No overall differences in safety and effectiveness have been observed between elderly and vounger patients

#### ADVERSE REACTIONS

In controlled clinical studies, the most frequently reported ocular adverse events following cataract surgery were capsular opacity, decreased visual acuity, foreign body sensation, increased intraocular pressure, and sticky sensation. These events occurred in approximately 5 to 10% of patients.

Other ocular adverse events occurring at an incidence of approximately 1 to 5% included conjunctival edema, corneal edema, dry eye, lid margin crusting, ocular discomfort, ocular hyperemia, ocular pain, ocular pruritus, photophobia, tearing and vitreous detachment.

Some of these events may be the consequence of the cataract surgical procedure

Nonocular adverse events reported at an incidence of 1 to 4% included headache, hypertension. nausea/vomiting, and sinusitis

#### DOSAGE AND ADMINISTRATION

Shake well before use. One drop of NEVANAC® ophthalmic suspension should be applied to the affected eye(s) three-times-daily beginning 1 day prior to cataract surgery, continued on the day of surgery and through the first 2 weeks of the postoperative period.

NEVANAC® ophthalmic suspension may be administered in conjunction with other topical ophthalmic medications such as beta-blockers, carbonic anhydrase inhibitors, alpha-agonists, cycloplegics, and mydriatics.

#### **Rx ONLY**

Manufactured by: Alcon Laboratories, Inc. Fort Worth, TX 76134 USA U.S. Patent No: 5,475,034

#### References:

1. Data on file. Alcon Laboratories, Inc. 2005. 2. Ke T-L, Graff G, Spellman JM, Yanni JM. Nepafenac, a unique nonsteroidal prodrug with potential utility in the treatment of trauma-induced ocular inflammation, II: in vitro bioactivation and permeation of external ocular barriers. Inflammation. 2000;24:371-384. 3. Lane SS, Modi SS, Holland EJ, et al. Nepafenac ophthalmic suspension 0.1% before and after surgery for postoperative anterior segment inflammation. Paper presented at American Society of Cataract and Refractive Surgery; April 19, 2005; Washington, DC. 4. NEVANAC® suspension prescribing information.







