The perspective missing from online reviews ... **RISK**

Surgeons see an opportunity to provide a “nuanced and more professional perspective” in online reviews

P. 6
Every day, CareCredit empowers our providers with resources to help patients overcome cost concerns and fit precise vision they want into their budget. A new study shows 68% of patients research treatment online, including cost and financing options, before moving forward with care.* It’s the reason we provide:

- **Practice Website Tools** that make it easy to add CareCredit financing options to your website, one of the research channels preferred by 64% of patients looking to purchase vision care.*
- **Custom CareCredit application** so patients can apply for CareCredit right from your website. On average, 6,200 new cardholders are approved every day.
- **Easy application by mobile device** with instant credit decisions.

Get to know the **PROS** of patient financing.
Enrolled: 866-859-9975 opt 1 then 6 • Enroll now: 866-853-8432

*Path to Purchase Research Study - Vision Surgery Category conducted by Rothstein Tauber Inc. on behalf of CareCredit, 2014.
From the publisher

More and more, patients are making decisions based on what they find online, but there is something patients might not consider when posting their thoughts that some ophthalmologists want taken into account: the risk factor. If reviews and assessments do not take into account the risk factor, physicians might be dissuaded from taking more complex, risky cases, fearing negative and misinformed reviews. “Surgeons are getting paid the same amount for the average cataract surgery, so it’s going to be harder and harder to find doctors who are going to want to do the really difficult surgeries—that’s a big issue,” said Sandra Lora Cremers, MD, Visionary Eye Doctors. Read more in the cover article, “The perspective missing from online reviews: risk.”

In the third and final part of “Make your next retreat your best retreat,” William B. Rabourn Jr., and Louis Pennow, MBA, BSHA, share how you can use your next employee retreat to define a goal for your practice, identify factors that stand in the way of reaching it, collaboratively arrive at solutions, and then calculate how well those solutions work. If you missed Part 1 (“Behind every successful retreat you’ll find a plan”) or Part 2 (“Plan to score with a goal-oriented event”) of this series, be sure to check them out in the September 2015 and December 2015 issues of Ophthalmology Business.

Employee theft is a threat to your practice that you may never have considered in the past, but unfortunately, it’s very real and can have a major impact on your bottom line. Common thefts include office personnel writing checks to themselves or to vendors to pay personal bills, the use of the company credit/debit card for personal reasons, and even medicine theft. “These types of fraud can add up quickly and represent large dollar thefts over time,” according to Steve Dawson, CPA, CFE, Dawson Forensics. In “6 ways to curb employee theft,” we present practices that you can implement immediately to curb the risk of theft.

These are just some of the articles in this issue of Ophthalmology Business—there are many more tips and new ideas packed into these pages. We hope you find the articles useful. We love to hear from our readers, so please feel free to contact us if you have a question or idea for a future article. Thank you for reading!
Contents

6 The perspective missing from online reviews: risk
Surgeons see an opportunity to provide a “nuanced and more professional perspective” in online reviews
by Liz Hillman

9 Make your next retreat your best retreat
Part 3 of 3: How do you spell “SUCCESS”?
by William B. Rabourn Jr., and Louis Pennow, MBA, BSHA

12 Changing looks, changing procedures
How oculoplastic, plastic surgery demands change by age
by Vanessa Caceres

15 Optometrist to ophthalmologist referrals: ethical and legal perspectives
Two experts weigh in
by John Banja, PhD

18 6 ways to curb employee theft
It’s the threat that ophthalmologists and administrators often miss
by Vanessa Caceres

21 Stick with the plan, Stan
Game-changer investing
by Roger S. Balser

23 Physician assistants: An antidote for a growing number of patients?
Number of PAs in ophthalmology is small but growing
by Vanessa Caceres

25 An autorefractor in the palm of your hand
Company creates smartphone-based autorefractor, and seeks to revolutionize how refractive error is measured
by Liz Hillman
REAL ESTATE FINANCING
THAT HELPS PRESERVE
YOUR CASH
BUILDING ACQUISITION • START UPS
EXPANSION • GROUND UP CONSTRUCTION

Call 910.796.1674 or visit us online for your healthcare financing needs.

JP Blevins
General Manager

Jon Voeller
Loan Officer

liveoakbank.com/healthcare
The perspective missing from online reviews: **RISK**

by Liz Hillman, Staff Writer
Surgeons see an opportunity to provide a “nuanced and more professional perspective” in online reviews

From restaurants to carpenters, dry cleaners to personal trainers, when a customer wants to make a decision for a service among a variety of options, one of the places they’ll likely turn for information is their computer. And physicians are in no way immune to online reviews.

In many ways such reviews are welcomed, but there is something patients might not consider when posting their thoughts that some ophthalmologists want taken into account: the risk factor. When patients don’t understand or include the level of risk of a condition or of a specific procedure, they may rate their experience without including all of the facts.

“Whether we like it or not, it’s part of the environment we’re practicing in nowadays,” said Yousuf Khalifa, MD, Emory Eye Center, Atlanta. “Patients are making decisions based on what they find online, and if we’re not part of that discussion of what they find, we have no way of presenting a more nuanced and more professional perspective.”

Sandra Lora Cremers, MD, Visionary Eye Doctors, Washington, D.C., coauthored a letter published in the *Journal of Cataract & Refractive Surgery*, advocating for ophthalmologists and their associated member groups to develop a risk-adjusted assessment tool for this purpose.

Noting that insurance companies and public interest groups seek transparency on doctors’ complication rates, Cremers et al. wrote that this information is “meaningless without weighing metrics according to valid operative risk profiles with agreed-on benchmark for outcomes … .”

The authors went on to write that “outcome benchmarks, weighted according to total risk profile, should be established by eye surgeons and not public groups.”

“We hope to see a day where eye surgeons create fair risk-adjusted benchmarks on outcome measures for all eye surgeries before public interest groups blindly determine best outcomes for us and our patients,” Cremers et al. wrote.

Dr. Cremers said weighting each case and its outcome according to respective risk would allow a surgeon’s skill to be adequately evaluated.

“A patient may have a surgical complication that requires another surgery, and the doctor may have explained the added risk to the patient prior to the surgery. However, unless the patient receives a paper stating, ‘This is your risk score for cataract surgery,’ he or she may not recall that conversation with the surgeon. The patient may attribute a ‘terrible outcome’ to a poor surgeon, when in fact the surgery may have been high-risk to begin with,” she said, providing an example where a risk-adjusted assessment tool could give context to outcomes.

Risk factor also applies outside of the operating room and can affect bedside manner and waiting room time as well, Dr. Cremers said.

“If you have a doctor who sees all the most difficult cases in the country, the waiting times are going to be higher,” she said, nothing that this is something patients should think about when penning reviews but likely don’t.

“If a surgeon deals with dying children every day, you might understand why he’s in a rush in your visit and has a bad bedside manner, even though he’s a brilliant surgeon,” Dr. Cremers said.

Dr. Khalifa said that he sees a potential value here in the American Academy of Ophthalmology’s Intelligent Research in Sight (IRIS) database. In a published response to the Cremers et al. letter, Dr. Khalifa wrote, “To help the general public make healthcare decisions and to offset possible misinformation and
misinterpretation of data from public websites such as Yelp, IRIS would first have to develop risk-adjusted metrics for the various ocular surgeries and use tools in tracking and benchmarking performance in these surgeries. “The Yelp Era is certainly upon us, and we are in an excellent position to provide accurate information to the public and drive continuous quality improvement in eye care,” Dr. Khalifa wrote in his reply.

If reviews and assessments do not take into account the risk factor, both Dr. Cremers and Dr. Khalifa noted that physicians might be dissuaded from taking more complex, risky cases, fearing negative and misinformed reviews.

“Surgeons are getting paid the same amount for the average cataract surgery, so it’s going to be harder and harder to find doctors who are going to want to do high-risk surgeries—that’s a big issue,” Dr. Cremers said.

“A preliminary analysis in IRIS of the return to the operating room after cataract surgery cases has shown that 30% had comorbidities—giving surgeons credit for taking on these complex cases is in the public interest,” Dr. Khalifa wrote in his reply letter.

Dr. Khalifa also said that he doesn’t think risk associated with certain conditions or procedures should be the only additional factor to take into account when evaluating surgeons. “I would also argue that surgeons in academic environments who are actively teaching residents and fellows should have a risk adjustment,” Dr. Khalifa wrote, and later said that those teaching residents “take on more risk in allowing a trainee to do [surgeries] but that gets billed in our names.”

On a smaller scale, data analysis can also be applied at the practice level as well.

Dr. Cremers said that her practice hired a research fellow to keep tabs on various data points. “We’re creating our own database to look at ourselves,” she said. “We try to do that risk adjustment within our practice to better understand how to improve things.”

This practice has already put its data analysis to good use. Dr. Cremers said they compared the phaco time/energy scores (cumulative dissipated energy or CDE) and times among the surgeons in the practice, controlling for lens density. This analysis revealed Dr. Cremers had the lowest phaco CDE. Her partner asked what she did during surgery and that conversation revealed Dr. Cremers was using a different technique—one she calls “phaco smash,” which she developed at Harvard Medical School to help residents decrease their phaco CDEs. Dr. Cremers said she educated this surgeon on the technique and he saw a marked decrease in his phaco energy scores. Formal results will be presented at the 2016 ASCRS•ASOA Symposium & Congress.

“We were very excited about this outcome,” Dr. Cremers said of the analysis. “It’s an example of how it is important to check your outcomes in order to become a better surgeon and help future patients.”

References

Contact information
Cremers: cremersmd@gmail.com
Khalifa: yousuf.khalifa@emoryhealthcare.org

TO VIEW THE CURRENT AND PAST ISSUES OF OPHTHALMOLOGY BUSINESS VISIT
DIGITAL.OPHTHALMOLOGYBUSINESS.ORG
Make your next retreat your best retreat

by William B. Rabourn Jr., and Louis Pennow, MBA, BSHA

Part 3 of 3: How do you spell “SUCCESS”?

Your return on investment can’t be determined in any meaningful way unless the criteria that will be used to define the success of the event have been established.

Is a purpose the same as a goal?

**GOAL:** What you want to achieve

**PURPOSE:** How you expect this event to help you to achieve that goal

If you read Part 2 of this series (“Plan to score with a goal-oriented event,” *Ophthalmology Business* December 2015, page 12), you know the importance of defining and articulating the purpose of your event, and you may recognize one of the examples we included to illustrate a specific business purpose for an event:

- “We will define the ideal patient experience, identify obstacles to delivering it, then brainstorm ideas for overcoming those obstacles.”

The goal, while stated somewhat indirectly, is nonetheless clear: We will provide our patients with an experience as close to “ideal” as possible. The purpose of the event will be to agree upon a definition of that ideal experience, to identify the factors that currently stand in the way of providing it, and to collaboratively arrive at solutions that will make it possible to reach that goal.

Let’s suppose that retreat participants define the ideal patient experience as follows:

- Everyone in the practice delivers the best possible care to each patient in a professional, personable manner that communicates concern for the patient’s welfare.
- Care is delivered in a clean, comfortable, and accessible facility.
- Appointments are available without undue delay.
- Patients experience minimal wait time in the reception area.

Participants then identify a number of problems, including one that we will focus on here: Reception area

continued on page 10
wait times, as tracked by the practice’s management software, are actually longer than they were 2 years ago. They have heard numerous complaints from patients who considered their wait time excessive. Participants identify the following factors that have increased wait times:

• As part of an efficiency initiative, the appointment calendar has been “tightened up” to fit more patients into each day’s schedule.

• That same initiative has modified the way patients are reminded of their appointments, and has been successful in reducing the number of no-shows and last-minute cancellations, contributing to the tightness of the schedule.

The facilitator notes that tighter, more efficient scheduling and improvements in patient attendance are themselves positive changes, and challenges participants to address the wait time issue without negatively impacting efficiency.

There is some discussion as to whether the wait times, while longer than in the past, are actually “too long.” The facilitator offers that these wait times are not significantly longer than average wait times at similar practices, and suggests that perhaps actual wait times don’t matter as much as patients’ perceptions on this matter. Might it be possible to shift those perceptions by providing a more interesting and comfortable reception area experience? A bit of brainstorming produces the following ideas:

• Change the magazine landscape. Participants note that most of the practice’s magazines are widely circulated publications related to homemaking, as well as the occasional news, entertainment, or sports magazine. These magazines also tend to be out of date or look worn out; it is not uncommon to see issues published more than 6 months ago.

Suggested action: Subscribe to a wider variety of magazines, some of which patients will not be likely to see elsewhere. Remove magazines more than 3 months old and issues with tattered covers from the racks.

• Create a distraction. The TV in the reception area runs a 5-minute video about the practice on a continuous loop. As a typical wait is longer than 5 minutes, repetitions of the video could be affecting patients’ perception of the time spent in the waiting area (“They kept me waiting so long that I saw that video three times!”).

Suggested action: Add enough content to the video to make it a few minutes longer than the average wait time (“That was fast—I didn’t even have time to watch the whole video!”). This might be a good time to freshen up the video and make it more interesting and appealing.

• Manage expectations. Think about how you feel when the hostess tells you that you have a 10-minute wait for a table or perhaps doesn’t volunteer any estimate at all. If the wait turns into 20 minutes without explanation, time drags when you see others being seated, and you seem to be waiting longer than everyone else, even if that is not the case. On the other hand, being seated after only 5 minutes rather than the estimated 10 puts an entirely different face on the wait.

Suggested action: At the time of check-in, the receptionist will note that the doctor is, isn’t, or is close to “running on time.” If the wait will be more than a designated number of minutes, the receptionist offers a sincere apology for any inconvenience and provides an estimated wait time that might make it possible to get the patient in sooner than expected—in other words, underpromise and overdeliver.

Participants noted that the line for check-in appears to be longer than in the past. The practice management software begins tracking wait time from the point of check-in, but from the patient’s point of view, the wait begins when they enter the check-in line. The line for check-out appears to be lengthier as well, and that particular wait can seem even longer when the patient is anxious to get out the door and move onto the next thing on their to-do list. Time spent standing seems longer than the same time spent comfortably seated.

Suggested action: Cross-train an employee from another administrative department to assist the receptionist or the cashier as needed during high-traffic times.

Calculating SUCCESS

Following the brainstorming session, the facilitator directs a discussion on tracking and evaluating the results of the suggested initiatives if and when they are implemented. How will patient satisfaction and changes in patient satisfaction be measured? Should a quantitative or a qualitative approach be implemented? These are two different perspectives, but they are not necessarily polar opposites. Elements of both can be used together to produce useful insights.

With a quantitative approach, actual wait times would be measured with very little effort; data could be extracted from the management system. To be useful, baseline “before” data should be compared with “after” data, and that would entail designating how far in the future “after” will be—1 month, 2 months, 6 months, a year—and how often will the data be analyzed. Monthly? Quarterly? Annually? All of the above? The group decides to recommend quarterly and annual reports.
Participants have already accepted that perceived wait times were at least as relevant—if not more so—than actual wait times. A qualitative approach to tracking improvement in patients’ perceptions would entail a bit more effort. The facilitator recommends that techs ask patients three short questions in the context of a casual, friendly interaction as they walk them to the exam room and get them situated.

- “Did you have to wait very long today?” (to elicit a qualitative yes/no answer)
- “How long did you have to wait?” (to elicit a qualitative answer that reflects their perception of time)
- “Do you feel satisfied or dissatisfied with how long you had to wait?” (another qualitative question to elicit a one-word answer)

The facilitator also recommends that patients’ answers be recorded in a manner that makes it possible to compare them to the actual wait time data provided by the management system. Over time, the widening or narrowing of the gap between patients’ perceptions of wait times and actual wait times should be useful in determining if actions taken to improve the quality of wait times are actually making a difference in patient satisfaction.

Additionally, the facilitator recognizes that the implementation and success of these strategies will inevitably depend upon the staff’s cooperation—including their ability and willingness to tweak strategies as needed. The facilitator recommends follow-up with staff members involved in implementation to determine how effective they believe the strategies to be. By including staff input, the practice takes advantage of its “human capital,” acknowledging the material value that a practice’s "boots on the ground" bring to the table. The collaboration provides momentum that builds and spills over into other situations and interactions that staff encounter on the job.

Finally, the facilitator concludes that the practice will compare the results of the strategy to the original situation in order to officially gauge whether the changes were beneficial. These participants have collaborated to:

- **Identify** a factor that stands in the way of their goal of delivering the ideal patient experience
- **Innovate** a strategy that they believe can move their goal within reach
- **Develop** a protocol for tracking and evaluating results that includes staff input

**Apply it to the bigger picture**

Remember that patient wait time is just one example of many possible concerns that may come up at your event. Each strategy that you and your staff develop to meet the purposes and goals predetermined for your event should be subjected to a similar system of success analysis after implementation.

If you choose to seek an outside resource, such as a practice management consultant, for assistance with front-end planning and defining of your event’s goals and purposes, you may also find their expertise beneficial as it comes time to calculate strategic success and optimize the return on your event efforts. OB
Changing looks, changing procedures

How oculoplastic, plastic surgery demands change by age

Just about everyone wants to look younger—and more and more people are demanding a fountain of youth at a younger age.

That’s where plastic surgeons and oculoplastics specialists are entering the picture. Physicians are finding distinct trends in what their patients want based on their age.

“Patients are starting to look at cosmetic procedures as regular maintenance. In the 1980s and 1990s, many patients would have one facelift and that would be it. Nowadays, patients have so many options available to them to treat and prevent every aspect of the aging face,” said Paul B. Johnson, MD, director, Rittenhouse Center for Aesthetic Medicine, Philadelphia, and director of oculoplastics, Soll Eye, with 3 locations in Pennsylvania and New Jersey.

Treatment is also starting earlier because both the quality and range of treatments available are so much better than 10 or 20 years ago, said Jeffrey Liegner, MD, Eye Care Northwest, Sparta, New Jersey.

Women are not the only ones clamoring for cosmetic oculoplastic procedures or plastic surgery these days; there are more men who want work done as well, Dr. Liegner said.
Eight percent of cosmetic procedure patients in 2014 were men, a 1% increase compared with 2013, according to the American Society of Plastic Surgeons.

**Botox’s popularity**
One universally popular procedure regardless of age is Botox (onabotulinumtoxinA, Allergan, Dublin); it’s the most popular cosmetic minimally invasive procedure in the U.S., according to the American Society of Plastic Surgeons—and it’s a procedure that many younger ophthalmologists will perform, said Kimberly Cockerham, MD, FACS, adjunct associate clinical professor, Stanford Department of Ophthalmology, Palo Alto, California, and in private practice, Central Valley Eye Medical Group, Stockton, California. “It’s easy and keeps patients coming to your office,” she said.

Patients are also starting to get Botox earlier. Dermatologist Lance Barazani, MD, Advanced Dermatology, Albertson, New York, used to see patients beginning Botox in their mid-30s and mid-40s, but that’s now declining. “It’s not uncommon today to treat patients in their mid-20s with Botox, wanting to get rid of the very early signs of aging,” he said.

In fact, it’s often recommended nowadays to get Botox at the first signs of wrinkling to prevent fine lines and wrinkles and ward off the need for more aggressive cosmetic treatment in the future, he said.

Beyond just Botox, here are other oculoplastic and cosmetic trends by age, as noted by oculoplastics specialists.

**In the 20s**
The messages of good skincare and tanning dangers have finally reached a younger generation.

“There is a trend toward prevention with improvements in sun blocks, decreased utilization of tanning beds, improvements in spray tans, and an overall acceptance that looking pale can be beautiful,” Dr. Cockerham said. The pale look is something that has had celebrity influence, she added.

“Most patients in their 20s are interested in preventative medical grade skincare products such as tretinoín and vitamin C serum,” Dr. Johnson said. “As patients approach their mid- to late-20s, they start to consider neuromodulators such as Botox and Dysport [abobotulinumtoxinA, Galderma Laboratories, Fort Worth, Texas] to treat fine lines and prevent future wrinkles.”

Other trends for patients in their 20s include topical skin treatments, lip enhancements with fillers, and permanent makeup.

**In the 30s**
Fillers that replace volume lost in the mid face are a bigger part of the mix for patients in their 30s, Dr. Johnson said. Fillers for the lips, such as Juvederm (Allergan), continue to be popular in this age group.

Another option that comes into play in the 30s is the removal of eye bags for patients with allergies or a genetic predisposition to them, Dr. Cockerham said.

Permanent makeup also is a continuing trend in the 30s as time is at a greater premium for patients with busy jobs or young children, Dr. Liegner said.

**In the 40s**
Looking good for a 25-year high school reunion leads a number of patients in their early 40s to consider blepharoplasty, Dr. Liegner observed. Blepharoplasties were the fourth most popular cosmetic surgical procedure in 2014, the American Society of Plastic Surgeons reported. The number of blepharoplasties increased 4% from 2013 to 2014.

Another 40-something trend: “Patients in their 40s tend to start to be more open to chemical peels and laser skin resurfacing,” Dr. Johnson said.

This is also when brow lifts and cheek enhancement with fillers become popular, Dr. Cockerham said.

Both the 30s and 40s are a common time to remove scars from acne that patients got earlier in life, he added.

**In the 50s**
The 50s are when Dr. Johnson sees more patients consider blepharoplasties, eyebrow lifts, and mini facelifts. “These patients also tend to continue with the neuromodulators, fillers, and peels that they’ve been using all along,” he said.

Sculptra (injectable poly-L-lactic acid, Galderma Laboratories) and other collagen inductions also are common for patients in their 50s, Dr. Cockerham said. So is intense pulsed light treatment for the skin, Dr. Liegner said.

*continued on page 14*
In the 60s
The same trends as outlined above continue for patients in their 60s and older, but face and neck lifts are more common as well, Dr. Cockerham said.

Cosmetic surgery tends to drop off for patients in their 70s unless they’ve always been glamorous types or if they work and feel self-conscious about competing against younger candidates, Dr. Liegner said.

Venturing into new territory
Although a number of ophthalmic practices offer Botox, there still are many who are not yet offering cosmetic procedures. One easy way to start is to incorporate medical-grade skincare into the practice. “Many skincare lines are dedicated to educating physicians about their products and how to avoid potential pitfalls,” Dr. Johnson said. “The injectables, peels, and surgeries tend to require more experience.”

A comprehensive ophthalmologist may find it only a small stretch to incorporate cosmetic procedures, said Dr. Liegner, who recommends starting with ectropion and entropion treatment and then functional blepharoplasty before moving to the cosmetic side.

Expect your patients’ oculoplastics and facial care plans to become a bigger part of the practice going forward as the products and treatments continue to improve. “I think we’re going to continue to see incredible developments in procedures that give great results and require little downtime,” Dr. Johnson said. “Today’s patients want to be able to get back to their normal routines quickly while looking refreshed, rejuvenated, and natural.”

Physician assistants and nurse practitioners, already mainstays in dermatology, will also play a larger role in oculoplastics in the future to meet patient demand, Dr. Liegner predicted. OB

Editors’ note: The physicians have no financial interests related to this article.

Contact information
Barazani: mchefec@gmail.com
Cockerham: CockerhamMD@gmail.com
Johnson: Johnson.Paul.B@gmail.com
Liegner: liegner@embarqmail.com
Optometrist to ophthalmologist referrals: ethical and legal perspectives

by John Banja, PhD

Since I began writing in *Ophthalmology Business* and *EyeWorld*, I’ve received an occasional inquiry or correspondence from an ophthalmologist on an ethical dilemma that he or she has encountered. Recently, I received this one, which is slightly modified from the original:

Cosmic Optometry is a co-owner of one of the three ophthalmology practices in town. Cosmic has seemingly gotten into the habit of referring “better” patients, i.e., well-insured, healthier, or with fewer or no comorbidities, to its co-owned practice, while referring less healthy, older, more acutely ill, and visually impaired patients to the other two practices in town. This has obviously soured relationships between those latter two provider groups and Cosmic, but Cosmic continues the practice. Is this legal? Is it ethical? Can the disgruntled practices just refuse to see Cosmic-referred patients?

In response to this case, I interviewed two professional acquaintances, Geoffrey Broocker, MD, a recently retired ophthalmologist from Emory University, Atlanta, and Tara Adyanthaya, JD, MBE, a bioethicist and healthcare attorney who practices with Morris, Manning and Martin, LLP, Atlanta. Here’s what they had to say.

**An interview with Dr. Broocker**

JB: Dr. Broocker, is this kind of referral arrangement common in ophthalmology?

---

continued on page 16
GB: I don’t know how you’d define “common,” but I’ve certainly come across it. I suspect that you would see it more in larger towns where there are multiple ophthalmology practices competing for patients so that each one is trying to improve its competitive advantage.

JB: This case clearly raises conflicts of interest that should be managed. But I’m amazed that until I started becoming acquainted with ophthalmology, I didn’t know about these “dark secrets.”

GB: That’s because we ophthalmologists are generally a quiet and reserved group of professionals. We don’t make waves. We don’t call attention to ourselves. We’re a “grin and bear it” group. Also, these optometric-ophthalmologic referral arrangements have become rather entrenched in the system and, for numerous reasons, seem very hard to change.

JB: But I know that many states have laws about professional-owned practices—such as when an orthopedic surgical group owns the physical therapy practice next door to which the orthopods refer patients. I know that a number of states require the owners to inform patients about their financial interests and holdings and give patients the option of going elsewhere.

GB: Sure, but many, probably most, patients aren’t listening very well, or they might be very concerned about upsetting their doctor or optometrist, so they often do anything he or she recommends. Just a simple, “Mr. Jones, you need to know that I’m a co-owner of the practice next door, which I nevertheless trust a lot because I work closely with them and I know their work better than I do other practices,” will be enough to sway most patients to that practice.

JB: Then there’s the fact that some patients aren’t going to be sophisticated consumers of care and they’ll just follow the recommendations of the treating professional.

GB: When I was in private practice in the 1980s, I’d frequently ask new patients why they came to see me rather than other ophthalmologists in town. The answer I got most frequently was, “I looked in the Yellow Pages under ophthalmologists, and ‘Brooker with a B’ was at the top of the list, so I called you.”

JB: Have you any practical recommendations on this case?

GB: I recently retired, and I must say that I’ve watched questionable practices like this one slowly evolve over the course of my career. The “corporatization” of medicine today amazes me because when I started, physicians would frown on advertising, much less these complex co-ownership arrangements. If what we’re doing is putting the business of medicine ahead of its patient-centered goals, then we are turning healthcare into a job—a very good job, don’t get me wrong, but much less than it can be. By the way, you’re leaving something out.

JB: What’s that?

GB: You haven’t talked about ophthalmologists who are no longer on active staff at community hospitals and don’t take call, and who, I believe, have contributed to this problem. I’ve come across any number of practices and hospitals that identify ophthalmologists as affiliated with a hospital or clinic, but when patients present with “inconvenient” emergencies, or no insurance, or are the kinds of patients these physicians don’t like to treat, they refuse to see them. So the patient winds up going to the few facilities that are required by law to provide them services. Physicians not covering call contribute to the cherry picking of patients that contributes to these problematic referral patterns. Fortunately, though, we also have a lot of ophthalmologists who do a great deal of pro bono work, which gratifies me a great deal.

JB: Any last words?

GB: I’ll be interested to see what Tara has to say because these dilemmas, as I’ve mentioned, are very hard to eradicate from the system. Also, the people who engage in them probably see themselves doing nothing wrong.

An interview with Ms. Adyanthaya

JB: Ms. Adyanthaya, what is your ethical and legal take on cases like these?

TA: I’ll begin with the ethical perspective: Patients’ best interests must be given priority over financial self-interest. As you suggested, potential financial conflicts of interest should be disclosed. Patients have a right to information necessary for evaluating recommendations that enables them to weigh alternatives to proposed treatments. It’s also troubling when referral patterns force certain providers to bear disproportionate burdens in treating clinically and financially challenging patients.

JB: Talk about the legal perspective.

TA: Whether referrals run afoul of the law is fact-sensitive, with the devil dancing in the details of the particular arrangement, services, payers, patient mix, and state in which the participants practice. Because of the complexity of the analysis, state law variations, and the fact-specific nature of the inquiry, providers should consult an expert to ensure
the legality of their particular arrangements.

The underlying purpose of the Fraud and Abuse Law is to prevent financial incentives from overriding patients’ best interests. Generally, the Stark Law is implicated if 1) referrals are made by an ophthalmologist or optometrist or his/her family member, 2) it involves a Medicare or Medicaid patient, 3) it involves Designated Health Services (DHS) (e.g., A-scans and B-scans; post-cataract eyewear; outpatient prescription drugs; and inpatient and outpatient hospital services), and 4) a financial relationship exists among the parties. Stark is strict liability, so intentions are irrelevant.

Because Cosmic is a co-owner, it has a direct financial interest in the practice to which it refers the “better” patients. If those referrals involve DHS provided to Medicare or Medicaid patients, the arrangement must meet an “exception” for it to be legal. At a minimum, Cosmic’s optometrists must be more integrated in the practice than just co-owners and must actually provide services to patients with a defined and appropriate compensation structure, such that the combined entity meets the definition of Group Practice. While privately insured patients do not trigger Stark, many states have analogues to Stark that cover such claims.

JB: Any other concerns?

TA: These referrals also need to clear an Anti-Kickback Statute (AKS) (42 U.S.C. §1320a-7(b)) analysis, which also may influence the Stark analysis because the relevant Stark exceptions require that financial arrangements not violate the Anti-Kickback Statute. They could give rise to claims under the Civil Monetary Penalties Law (42 U.S.C. § 1128A(a)(7)). The AKS prohibits directly or indirectly offering or receiving anything of value in exchange for or to induce referrals. Even if legitimate reasons for remuneration exist, if one purpose is to induce referrals, the arrangement is illegal.

Nevertheless, “safe harbors” protect certain practices, and even arrangements not meeting a safe harbor are not necessarily illegal. So again, the legal analysis is case by case, and the context and the details of the compensation arrangement matter. The government will generally be skeptical of any referral pattern differentiating between patients based on complexity, insurance (especially if the distinction is between federal and non-federal beneficiaries), or ability to pay.

JB: Dr. Broocker worried about cherry picking as well and that there are not only state laws that disincentivize it, but physicians who cherry pick might be in violation of their contracts with payer sources.

TA: That’s a legitimate worry. Some payer contracts require providers to accept all-comers and define under what circumstances they can decline patients or terminate relationships. Some states also have enacted laws protecting patients’ rights, which can limit a provider’s ability to reject patients based on ability to pay. Ophthalmologists should proceed cautiously before refusing care to patients based solely on ability to pay or which insurance they carry.

JB: The bioethics part of me finds these arrangements troublesome because they are based on economic incentives rather than on optometrists and their patients making fairness-based decisions on an ophthalmology practice. For example, suppose the Cosmic co-owned ophthalmology practice is a considerable distance from where the patient lives but another, just as good one, is much closer. The patient then suffers the burden of the unnecessary travel costs. Also, an ethical axiom going back to Aristotle is that burdens should be distributed and shared equally among equals, but arrangements such as these violate that moral intuition. On the other hand, ours is a capitalistic, market-place-driven economy so I’d bet many practices simply think, “If it’s legal and it increases our revenues, why not? Everybody does it or would if they could.”

TA: Many providers who entered the profession because they wanted to help patients now feel they have no choice but to participate in practices like these to survive. To address these barriers to ethical practice, professional groups, lawmakers, and people with influence must take steps to address systemic dysfunctions that prevent or discourage providers from meeting their ethical obligations.

OB

Contact information
Adyanthaya: tla@mmmlaw.com
Broooker: ophtgb@emory.edu

Dr. Banja is a professor and medical ethicist at the Center for Ethics, Emory University, Atlanta. He served on the ASCRS Governing Board and can be contacted at jbanja@emory.edu.
6 ways to curb employee theft

by Vanessa Caceres, Contributing Writer
There’s a threat to your practice that you may not even consider—and it’s literally right beside you every day.

Employee theft can have a major impact on the bottom line of medical practices—and cause stress—yet most physicians and administrators spend little time thinking about it or preventing it, said Steve Dawson, CPA, CFE, Dawson Forensic Group, Lubbock, Texas.

“Through almost 32 years of investigating fraud, I have learned that internal fraud prevention and theft prevention is a need all medical practices have but do not know they have,” Mr. Dawson said. “I have seen that this is not a major issue on the radar of doctors or practice administrators, but it should be.”

Just how big of a threat is employee theft to medical practices? Consider this: A 2009 survey from the Medical Group Management Association (MGMA) found that members reported 782 cases of theft totaling $94.6 million in losses. The most common examples of theft were theft of receipts, cash on hand, disbursements (forging or altering a check), submitting fake invoices, paying personal expenses with company funds, and payroll and expense reimbursement.

Eighteen percent of cases in the MGMA survey were for employee theft of $100,000 or more; of the $100,000 or more losses, 70% took place in smaller groups of 10 or fewer physicians. In the survey, 18 respondents reported $1 million+ losses at practices.

Those numbers don’t surprise fraud experts and seasoned administrators.

“In my experience as an administrator for private eyecare practices, I’ve witnessed a wide variety of theft among staff and patients alike,” said Jodie Boxe, vice president of marketing and operations, IRIS International Consulting, Chicago. “It’s important to address the different types of theft and how to mitigate the threat of loss through barriers, security features, and knowledge.”

Mr. Dawson has helped analyze several types of employee theft, the most common being cash theft from accounts receivables. Other common thefts he has witnessed are office personnel writing checks to themselves or to vendors to pay personal bills, the use of the company credit/debit card for personal reasons, and even medicine theft.

“These types of fraud can add up quickly and represent large dollar thefts over time. While these risks are common in any type of company, medical offices present some unique theft risks in that they deal with volume,” Mr. Dawson said. So, a patient could have various payments or credits coming from insurance companies, private pay, and managed discounts simultaneously. “The more financial transaction volume that exists, the more the opportunity exists to lose or hide the fraud in ‘paperwork messes,’” he said.

Continued on page 20
“A common thought process used by forensic accountants and auditors is the 10-10-80 rule, which states that 10% of employees will steal under any circumstance, 10% will never steal, and 80% will steal under the right circumstances.”

It’s surprising to find the number of businesses that have put someone in a financial accountability position who has a criminal background related to financial crimes, Mr. Dawson said. However, he added, “I want to do everything to change the mindset that if we have good people, we won’t have fraud,” he said. In fact, the vast majority of investigations he’s performed have found that the person committing fraud is a decent person who is under financial pressure, can rationalize the theft (thinking that they will eventually pay the money back), or has the opportunity—when the business has few internal controls.

In fact, a common thought process used by forensic accountants and auditors is the 10-10-80 rule, which states that 10% of employees will steal under any circumstance, 10% will never steal, and 80% will steal under the right circumstances.¹

2. **Track inventory.** Consider all tangible items at the practice, including frames, contact lenses, pharmaceuticals, and accessories, and track them using an inventory management system, Ms. Boxe suggested. Make sure to conduct a physical inventory regularly and compare the results with inventory management. Keep tangibles under lock and key, Ms. Eaton recommended.

3. **Let employees know you are concerned about fraud.** “The number 1 preventive control that exists is to raise the perception of detection. If a potential fraudster believes they have a good chance of getting caught, they are less likely to steal,” Mr. Dawson said. This is why he advises periodic training to raise awareness about fraud that will detail what the office does to address the risks associated with fraud. He also supports having a fraud policy that details what fraud is and a fraud reporting policy. Such policies can be documents that employees must sign once they review them. “The contents of the policy should be reviewed at least annually, which in and of itself raises the level of fraud awareness for staff,” he said.

4. **Separate financial-related duties.** There should be more than one person handling financial-related tasks as a way to maintain internal control. What Mr. Dawson usually advocates is as follows:
   a. One employee logs cash or patients’ accounts receivable payments for the day’s receipts.
   b. A different employee posts to the patients’ accounts receivables.
   c. If there is adequate staff, the deposit slip is prepared by a third employee.
   d. The amount posted to patients’ accounts receivables should be compared to the amount received for the day by the first 2 employees.

Sometimes there isn’t sufficient staff for such a process, so another process Mr. Dawson will advocate is to limit the number of people (1 or perhaps 2) handling and documenting payments. Although this may not prevent fraud, it does make it easy to narrow the circle of blame.

5. **Out of sight, out of mind.** If employees know they may be visually monitored, it will help cut down the risk of theft, Ms. Eaton said. Arrange the office in such a way that administrators or doctors have a good line of sight on employees.

6. **Use electronic health records (EHRs) to your advantage.** For example, to cut down on the altering of patient records to delete patient encounters or payments (because an employee has potentially pocketed such payments), use the audit function of your EHR software, Ms. Boxe advised. Unique log-in credentials for each EHR user can help you track who made certain changes. “It is crucial to communicate to staff how the audit function works by storing a record of each action within the software to deter data alteration,” she said.

Although the bells and whistles associated with EHRs can sound impressive, you’ll ultimately have to rely on old-fashioned monitoring when it comes to curbing employee theft. “Nothing replaces prevention-based measures that are based on awareness. If the doctors and practice administrators raise their level and that of the staff of fraud awareness through periodic training, half the battle is won,” Mr. Dawson said. OB

Reference

**Contact information**
Box: jboxe@irisinternationalconsulting.com
Dawson: steve@dawsonforensics.com
Eaton: jean@informationmanagers.ca
Stick with the plan, Stan

by Roger S. Balser

Game-changer investing

Augusta National Golf Club in Augusta, Georgia will once again play host for the 2016 Masters Tournament, slated for April 7. If you’re a golf fanatic like me, I’m sure you’re anxiously anticipating the showdown among the sport’s newest generation of superstars like Jordan Spieth, Jason Day, and Rory McIlroy.

The Masters Tournament challenges its vaunted participants by forcing them to develop a disciplined playing strategy that is centered on their individual strengths and weaknesses—a winning game plan that the golfer can trust even after the dubious double bogey on the famous 13th hole. Can you imagine any of these pro golfers not planning a strategy for this tournament?

Just like golf, investing also requires a disciplined game plan.

I find it very interesting that when the markets are calm and I speak with a prospective client for the first time, I always talk in general terms about strategies. But it seems to me that when the markets are going haywire, folks really don’t want to discuss strategy. They prefer panic and chaos, and tend to rip up their game plan to plod along with the uninformed and dump everything. They abandon their game plan.

As an investor, wholly trusting your investment strategy isn’t easy. It doesn’t matter what strategy you subscribe to, be it buy-and-hold, value investing, or my personal favorite, relative strength. All strategies will at some point in time hit a rough patch and subsequently underperform.

continued on page 22
And it’s nearly impossible to stick with a strategy during a period of underperformance or volatility.

You should know that ditching your game plan when times get tough is a recipe for disaster. You may as well not even have a strategy at all. Unfortunately, that’s what people do when the market starts pulling back.

The 2015 DALBAR Quantitative Analysis of Investor Behavior report supports this premise. The report states that for the last 20 years, the average investor has earned annualized returns just north of 5% (5.19% to be exact). Over the same time period, the Standard and Poor’s 500 Index (S&P 500) returned 9.85%.

So the S&P 500 has earned an annualized return of almost 10% while the average investor took home about half that amount.

**Why the big gap between investors and the index?**

The main reason the S&P 500 is able to outperform the average investor is because that index doesn’t have any emotions. It’s just an index. It doesn’t read the newspaper or watch the pundits on television. The whole idea with the S&P 500 is it buys the 500 largest publicly traded companies in the U.S. and weights them according to their market capitalization.

It’s a very simple strategy. It makes changes when it’s appropriate to make changes. It doesn’t say, “The market is in trouble. Time to ditch.” That’s not how the S&P’s strategy works. It doesn’t deviate from its strategy based on market conditions. These are its rules and it must abide by them. We should all take a page out of its book and become just as loyal to our own investment strategies.

In more than 25 years in the investment business, I’ve seen study after study that supports the fact that rules-based, statistically driven models typically outperform humans. But when underperformance or market volatility rears its ugly head, our brains tell us to ditch. The strategy is broken.

**Why is it that investors don’t trust a rules-based strategy?**

This phenomenon has been dubbed “algorithm aversion” in an excellent research paper titled, “Algorithm aversion: people erroneously avoid algorithms after seeing them err” published by the American Psychological Association.

The paper states that, despite proven research that demonstrates the superiority of evidence-based algorithms to human forecasters, people continue to show more willingness to trust an emotional human being over a set of emotionless rules. Here’s an excellent example of this behavior from the paper:

“Imagine that you are driving to work via your normal route. You run into traffic and you predict that a different route will be faster. You get to work 20 minutes later than usual, and you learn from a co-worker that your decision to abandon your route was costly; the traffic was not as bad as it seemed. Many of us have made mistakes like this one, and most would shrug it off. Very few people would decide to never again trust their own judgment in such situations. Now imagine the same scenario, but instead of you having wrongly decided to abandon your route, your traffic-sensitive GPS made the error. Upon learning that the GPS made a mistake, many of us would lose confidence in the machine, becoming reluctant to use it again in a similar situation. It seems that the errors that we tolerate in humans become less tolerable when machines make them.”

Simply put, we’re less apt to trust a system of rules than our own instincts or those of another human. This is problematic because, as I pointed out earlier, emotionless, rules-based investment strategies have been proven to outperform most human investors. Even the S&P 500’s simplistic strategy of owning large cap U.S. stocks outperforms, mostly because it just plays by the rules.

Trusting a rules-based strategy isn’t always going to be easy, but in the long run you’ll likely be very happy you stuck with it. OB

**Reference**

Physician assistants:
An antidote for a growing number of patients?

by Vanessa Caceres, Contributing Writer

Number of PAs in ophthalmology is small but growing

You’ve heard it before: The baby boomers in the U.S. add to the graying of the population, and people are living longer. That means there are more patients coming to your office and more chronic eye diseases to treat.

At the same time, the number of ophthalmologists is actually projected to dwindle in the next decade.

Could physician assistants (PAs) be part of a new and improved model of care within ophthalmology? If you listen closely at ophthalmology meetings, more eyecare practices are thinking about adding PAs. About a third of PAs work in primary medicine, and their numbers within ophthalmology are still small, but there’s growing interest and enthusiasm to adding a PA to the mix along with ophthalmologists and optometrists.

PAs are an expanding part of clinical care among all specialties. “The demand for certified PA services in every clinical specialty and setting has skyrocketed in the past 5 years,” said Dawn Morton-Rias, EdD, PA-C, president and CEO, National Commission on Certification of Physician Assistants, Johns Creek, Georgia. “As baby boomers age, it’s easy to imagine more PAs in ophthalmology with the growing demand for surgeries to address retinal repair, glaucoma, cataracts, and corneal replacement. PAs are important assets to surgical teams, serving as first assistants in the OR, and providing preop and postop care to ensure effective management of comorbidities and enhanced patient compliance.”

“Outsourcing part of the care to PAs makes sense both economically and medically,” said Christopher Hanifin, PA-C, chair, Department of Physician Assistants, School of Health and Medical Sciences, Seton Hall University, South Orange, New Jersey. “We seek to train clinicians who can go into almost any specialty or setting and make a positive impact.”

A typical PA training

PA programs are experiencing rapid growth, Mr. Hanifin said. The current number of training programs is approaching 200, compared to just over 150 in 2010. There are plans to open about 50 more programs in the near future. These programs accommodate about 10,000 new graduates entering the practice each year, he said.

The training that PAs receive is modeled after medical school, Mr. Hanifin said. For the most part, training focuses on primary care-related specialties. “The most significant thing that a PA would bring to the table is a broad knowledge of general medicine,” he said.

During training, PAs rotate through all major areas of medicine; however, exposure to ophthalmology may only be limited to a day or two. PAs can do much of what the physician does, with some variation by state, said Ann Davis, MS, PA-C, vice president, constituent organization outreach and advocacy, American Academy of Physician Assistants (AAPA), Alexandria, Virginia. They can make diagnoses, follow patients,
order lab tests and imaging, and prescribe medication.

“In broad terms, PAs can generally do anything that their collaborating physician delegates to them,” Mr. Hanifin said.

PAs enjoy their ability to move among different specialties and subspecialties, Ms. Davis said.

Fitting a PA into eyecare: One example
Martha Jane Guilbault, PA-C, Wake Forest Baptist Medical Center, Winston-Salem, North Carolina, was a PA in family medicine and other specialties before entering ophthalmology, where she has worked with eye surgeons for 7 years. Her practice has 12 MDs.

At her practice, once a patient is slated for surgery, she will evaluate the patient preoperatively, and she will explain the surgery in layman’s terms. She ultimately medically clears most of the patients for surgery; otherwise they are cleared for surgery by the anesthetist if getting general anesthesia. She finds herself collaborating frequently with the corneal and retinal specialists, anesthesiologists, and the scheduling people. She also finds herself serving as an objective sounding board for patients who may be reluctant to follow a doctor’s orders—be it from their primary care doctor or a specialist.

Ms. Guilbault also can perform an ultrasound of the eye to determine if something may need further evaluation by the ophthalmologist.

Although ophthalmologists often feel “myopic” in their focus on the eyes, Ms. Guilbault sees a connection with the work she does and the patient’s overall health. “We all have to look at the big picture,” she said, noting the large number of patients with conditions like diabetes or kidney problems who may have eye-related issues.

With Ms. Guilbault’s help, the practice has been able to cut down significantly on the time it takes to examine patients preoperatively and clear them for surgery.

Another PA/eyecare example
At Minnesota Eye Consultants in the Minneapolis area, 2 PAs (and soon, a third PA) evaluate patients for the preop physicals, said Candace Simerson, president and COO, Minnesota Eye Consultants. Surgeons got frustrated when they would schedule eye surgery but patients did not visit their primary care doctor within the necessary timeframe for the physical—or they didn’t have a primary care doctor to see, Ms. Simerson said. That prompted the practice to hire the PAs and add them to their mix of 14 ophthalmologists and 13 optometrists who work among 4 surgery centers.

The PAs also see the 250 staff members at Minnesota Eye Consultants for urgent care concerns. “We are self-insured, so this limits the need for our staff to go to urgent care and take time off from work,” Ms. Simerson said.

As in other typical eyecare practices, the surgeons handle evaluations and consultative care, while optometrists handle internal postop visits, routine eyecare, follow-up visits, and on call. “If a practice did not have a robust optometry team, the PA could also do urgent care and postop visits with proper training. The PAs could handle on call if needed,” Ms. Simerson said.

4 tips to add a PA to your practice
1. Start at the ground level. If there’s a PA program near you, offer a rotation in your office, Ms. Davis suggested. “Having a PA student on rotation can function like a long-term job interview to see if there’s a good fit,” she said.

It also exposes new PAs to aspects of eyecare they may otherwise not learn about.

“The lack of exposure to the field in PA school along with the lack of postgraduate training opportunities probably causes many students to overlook ophthalmology as a potential career choice,” Mr. Hanifin said.

2. Advertise via specialty organizations. In addition to the usual websites or hiring venues you might use, post an ad through the AAPA website or through your state or regional PA groups. You can ask colleagues in specialties that commonly hire PAs about PA organizations in your area or if they know about PAs who may be job searching, Ms. Guilbault recommended.

3. Decide how you will bring new PA hires up to speed within ophthalmology. At Minnesota Eye Consultants, when the first PA was hired, she spent 2 months following surgery, observing surgery, helping design the workflow, charting, and billing system, and coordinating care with outside providers as needed.

4. Consider the logistics. Adding a PA will require rethinking workflow design, staffing, space considerations, and charting and billing set up, Ms. Simerson said. “You may also need approval to bill CPT codes to payers for their services,” she added.

Contact information
Davis: ann@aanp.org
Guilbault: maryr@nccpa.net
Hanifin: Christopher.Hanifin@shu.edu
Morton-Rias: maryr@nccpa.net
Simerson: cssimerson@mneye.com

Nurse practitioners on the rise, too
The number of nurse practitioners is growing as well. The American Academy of Nurse Practitioners (AANP) predicts that the number of NPs will increase by 2025 to 224,000. There were 205,000 licensed NPs in the U.S. in 2014. The majority work in primary care settings.

continued from page 23
An autorefractor in the palm of your hand

by Liz Hillman, Staff Writer

Company creates smartphone-based autorefractor, and seeks to revolutionize how refractive error is measured

When the autorefractor at one of the Northern New Jersey Eye Institute’s 4 offices went down, the technicians and physicians didn’t need to wait days or weeks to have it repaired or spend thousands of dollars to have a new one shipped in.

The problem was fixed in a matter of minutes with SVOne, a handheld, smartphone-based autorefractor by Smart Vision Labs (New York).

“It was convenient, easy for someone to drive it up there, and we had an autorefractor working in 5 minutes as opposed to having to ship it out for repair for who knows how long,” said Bernie Spier, MD, South Orange, New Jersey.

The SVOne, a Class 1 device registered with the U.S. Food and Drug Administration, uses the computer of an iPhone and wavefront aberrometry to measure refractive error. Smart Vision Labs co-founder Yaopeng Zhou, PhD, said the nearly $4,000 device, which comes with the iPhone, is meant to be thought of as a whole system.

“The thinking behind this is a lot of people already have a phone, but it’s a communication device. If we are launching this product as a serious medical product, we don’t want people to have a bad experience … taking a call or a scratched lens or different things; so we made a decision: Why don’t we provide a dedicated phone for this device?” Dr. Zhou said, explaining why they didn’t design it to work as an attachment with a person’s existing phone.

“Our goal is to build the best refraction technology on the market.”

continued on page 26

SVOne is a smartphone-based wavefront aberrometer used to measure refractive error.

The device weighs less than a pound and costs nearly $4,000, making it far less bulky and expensive when compared to a traditional autorefractor. A recent study published in a peer-reviewed optometric journal found that SVOne obtained refractive measurements as well as traditional methods.

Source: Smart Vision Labs

continued on page 26
SVOne, which weighs less than 1 pound, uses the Shack-Hartmann wavefront sensor and has a sphere range of −10 D to +10 D and cylinder range of −5 D to +5 D with a data acquisition time of 5 seconds per eye.

The big question, Dr. Spier said, is “Is SVOne accurate?”

According to a study published in the journal Optometry and Vision Science in December 2015, funded by a grant from Smart Vision Labs and the Pilot Health Technology Initiative of New York City, refractive errors in young, healthy patients measured using SVOne were not significantly different from those measured with retinoscopy, subjective refraction, the KR-1W Wavefront Analyzer (Topcon Medical Systems, Oakland, New Jersey), or the Righton Retinomax 3 (Right Group Manufacturing Co., Tokyo).

Dr. Spier said he wanted to see how the device would perform in older patients and in eyes with pathology, like cataracts or glaucoma. Taking a random sampling of the first 30 patients in the office one morning, Dr. Spier said they compared how both SVOne and a traditional autorefractor performed in testing for refractive errors.

“We showed an excellent correlation between the device and our desktop autorefractor,” he said of the unpublished research.

As for the functionality of it, Dr. Spier said SVOne was a little more particular when it came to alignment compared to traditional autorefractors.

“It’s a little bit more challenging for the technician because ... getting the eye perfectly aligned with the instrument can be one of the bigger challenges with these things where you’re trying to do measurements on the eye,” he said.

As for the patient experience, Dr. Spier said SVOne doesn’t have a chin rest for the patient like most desktop autorefractors, but he doesn’t think that’s a problem.

“They have to hold their head, but I don’t think there’s much of a difference for the patient,” he said.

While SVOne might seem pretty handy from an optometric angle, Dr. Spier finds the device useful for an ophthalmologist as well.

“Ophthalmologists do refractions just as much as optometrists do,” he said. “We’re getting the same information, but we’re using it differently. They’re going to take the same information and they’re going to prescribe glasses. ... We’re going to use that information to potentially make a decision about cataract surgery or LASIK or whatever.”

Given the use of autorefractors in an ophthalmic practice, Dr. Spier said having an extra one available has been beneficial if a desktop version breaks and when there’s a backup.

“We often see more than 100 patients a day,” Dr. Spier said. “We can use SVOne to move things along.”

Dr. Spier said the size and cost of the device is advantageous for volunteer work as well.

Volunteering his medical services annually in Grenada for up to 7 years, Dr. Spier said last year was the first year he took a traditional autorefractor with him.

“We brought one down and it worked, but it was a huge box,” he said.

This year, Dr. Spier said he looks forward to bringing SVOne with him instead.

At the end of February, Smart Vision Labs launched a new, similar device that also measures refractive errors, but unlike SVOne, it does so without an operator.

“It’s a self-operating vision test,” Dr. Zhou said of the new technology.

Dr. Zhou said the intent of a device like this is to make vision testing more convenient and accessible, ultimately leading to more people experiencing corrected vision. He said that results, regardless of where the test is taken, could be shared over the cloud with physicians or eyeglass makers.

“Getting that prescription from a doctor not in the same building as you or even in the same city ... we’re using technology to change the way people are getting glasses,” Dr. Zhou said.

Dr. Spier, who has tried out this device, said if it turns out to be accurate enough, it could “change the eyecare market in a fundamental way. We will test the functionality of the SVOne Enterprise in our practice in early March,” Dr. Spier said.

As for a device that could eliminate an in-person exam with a doctor, Dr. Spier said he thinks younger, healthy, asymptomatic patients often don’t need a comprehensive eye exam just to get glasses. As a patient gets older, entering the years of early cataract development and presbyopia, a more regular eye exam should be necessary even if he or she is asymptomatic, Dr. Spier said.

Another application, which Smart Vision Labs has patented but does not yet have a timeline for its development, is a smartphone-based corneal topographer.

Dr. Zhou thinks medical uses of smartphone technology will continue to increase, and Dr. Spier agreed.

“Anything that could be put on a smartphone that is accurate, people will use,” he said. “The smaller the device, the better, short of something where you need absolute fixation, like for surgery.”

Reference

Editors’ note: Dr. Zhou and Dr. Spier have financial interests with Smart Vision Labs.

Contact information
Spier: sbern18@comcast.net
Zhou: yaopeng@smartvisionlabs.com
Key Features

No Cost DICOM Image Management System, diagnostic machine, & practice management integrations.

Average Implementation Time: 90 days

Server Sync™ increases remote office productivity & eliminates outages caused by unreliable internet connections.

Mobile App securely access your patient records on your mobile device.

ShareCloud® streamline your implementation by sharing customizations and letters with other EyeMD EMR users.

Subspeciality content included for Retina, Cornea, Pediatrics, & Glaucoma.

Scalable to any practice size.

AAO Patient Education Handouts integrated & updated automatically in EyeMD EMR.

Iris™ Registry Support - registry based PQRS reporting & clinical practice benchmarking.

Visit us at ASCRS Booth #1609

One of the Fastest Growing Private companies in the US two years in a row
Marco Refraction Systems — Advanced automated instrumentation includes the OPD-Scan III Wavefront Aberrometer, the TRS-3100/TRS-5100 and EPIC Digital Refraction Workstation, Autorefractors/Keratometers (with VA measurement, Subjective Sphere Refinement, Tonometry, Glare testing on certain models) and Lensmeters – all with EMR Integration. The real difference is Marco.

The Difference is Marco.