

iTech

BUILDING THE OPHTHALMIC TECH'S COMMUNITY OF PRACTICE

MANAGING VITREOMACULAR ADHESION USING OCRIPLASMIN AND VITRECTOMY

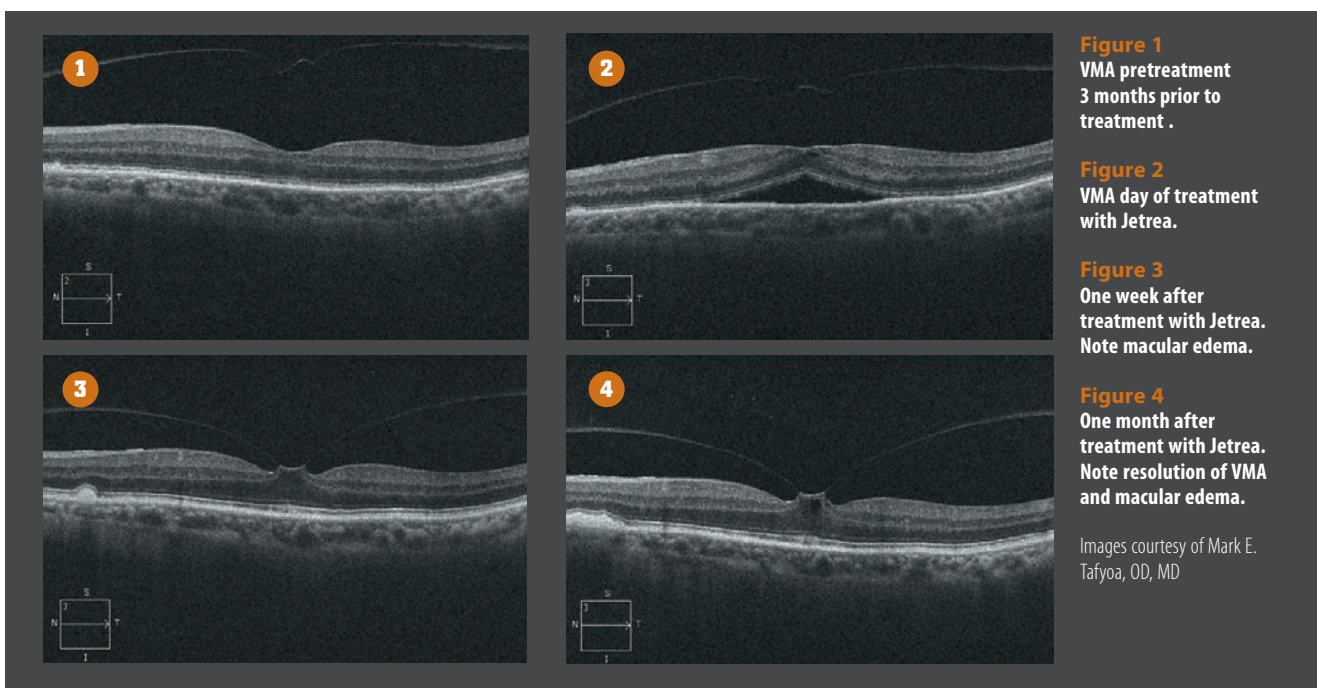


Figure 1
VMA pretreatment
3 months prior to
treatment .

Figure 2
VMA day of treatment
with Jetrea.

Figure 3
One week after
treatment with Jetrea.
Note macular edema.

Figure 4
One month after
treatment with Jetrea.
Note resolution of VMA
and macular edema.

Images courtesy of Mark E.
Tafyoa, OD, MD

By Mark E. Tafyoa, OD, MD

Since the invention of ocular coherence tomography (OCT), we have learned more about the eye and treatment of retinal disease. Reese first described vitreomacular traction (VMT) in 1970,¹ when he was able to confirm his diagnosis by histology. But now we can see the changes in the eye using OCT, and, because we cannot measure the traction histologically, the diagnosis is properly coined vitreomacular adhesion (VMA). This adhesion is associated with cystoid macular edema (CME), epiretinal membrane formation (EMR),

and macular hole formation (MH).² Aside from diabetic retinopathy (DR) and age-related macular degeneration (AMD or ARMD), VMA is very prominent in my practice.

VMT is VMA with any abnormal macular retinal architecture. Symptomatic VMT can be treated with vitrectomy. And while this procedure is successful, just as with every surgery, there are also risks. Vitrectomy is invasive, costly, labor-intensive, and has a long healing time.³ In some cases, I may decide to insert a gas bubble into the eye. If so, the patient has to maintain facedown positioning until the gas bubble inserted

into their vitreous dissolved. This typically takes days to weeks. In October 2012, the FDA allowed us a new treatment option—the first medical treatment for symptomatic VMA—a pharmaceutical agent called Jetrea (ocriplasmin, ThromboGenics).⁴

Using ocriplasmin

Jetrea comes to us frozen and packed in dry ice. We obtained a freezer from the manufacturer to store the medication before use. My assistants carefully remove the Jetrea from the container, avoiding direct contact with the dry ice. They im-

See **VMA** on page 3



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VMA

Continued from page 1

mediately store it in our Jetrea freezer. It is thawed for a few minutes before being injected.

The advantage of using Jetrea is that it is administered by in-office intravitreal injection. Because we use Avastin (bevacizumab, Genentech), Lucentis (ranibizumab, Genentech), and Eylea (aflibercept, Regeneron) on a regular basis, my assistants are very comfortable with this procedure. There is no involved hospital admission process. There is no inconvenience to the patient of having to be face-down for prolonged periods. We perform a benefits investigation to make sure the patient's medical insurance will cover the treatment, then we initiate applying for copay assistance if the patient qualifies. This reduces the patient's burden, depending on annual income, of approximately \$800 per treatment to something more manageable.

I have found that patient selection for Jetrea is critical to the success of the treatment. Patients with small focal adhesions and/or small macular holes have done well in my experience.

The risks of Jetrea therapy are relatively few compared to vitrectomy. According to the FDA, the most common side effects reported in patients treated with Jetrea include:⁴

- Eye floaters
- Bleeding of the conjunctiva
- Eye pain
- Flashes of light (photopsia)
- Blurred vision
- Undeared vision
- Vision loss
- Retinal edema (swelling)

■ Macular edema

I see my Jetrea patients one week after injection. I have seen release of VMA after this short amount of time. If I do not see residual macular edema, then we schedule the patient to return in one month. If macular edema is present, then I treat it and ask the patient to return in approximately 2 weeks. Of course, I treat and follow any other possible side effects, if present.

We have been offering this treatment option to our patients for less than 1 year, but we have had excellent results. I carefully select the optimum candidates and hope for the best. So far, I have found that symptomatic patients treated with Jetrea have experienced release of the adhesion. This release appears to result in macular edema and subretinal fluid at their one-week injection visit. I treat the macular edema with topical medications. With time, the swelling subsides, and visual acuity improves. Patients with VMA and small MHs have resulted in closure of the hole. The resounding reaction from my patients has been positive. They are pleased to have complete resolution of their VMA and restored vision. At the 1-month visit, we must consider other treatment options if the adhesion is not dissolved and if the patient is still symptomatic.

Moving to vitrectomy

Unfortunately, there is the possibility of failure. Before we treat, I always explain to patients that there is a risk that Jetrea will not work. If it does not work and the patient is bothered by his or her VMA, then I perform a vitrectomy and membrane peel as an outpatient procedure at

a local hospital. I have found that Jetrea helps to loosen the adhesion between the macula and vitreous, so surgery is fairly straightforward.

We see patients the day after their vitrectomy. We ask the patients to keep their patch and protective shield over their operated eye. Once the patient arrives to our office, one of my assistants carefully removes the patch and shield and gently cleans the area. The assistant then measures visual acuity without and then with pinhole. As long as the eye appears as I would expect, we see the patient again in 1 week and again in 1 month. Of course, if there is inflammation or increased intraocular pressure, I treat it and see the patient more often.

VMA is an OCT finding. Once the adhesion progresses to abnormalities in the retina and becomes symptomatic, some patients then may become candidates for Jetrea treatment. Careful selection of symptomatic patients with focal areas of adhesion and/or small holes have produced the best post-injection results. I look forward to offering Jetrea treatment to more of my patients. ▀

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Dr. Tafoya is in private practice in Waipahu, HI.

INFECTION CONTROL IN THE EYECARE OFFICE

ADOPTING UNIVERSAL INFECTION CONTROL PROTOCOL

By Ernie Bowling, OD, FAAO

As eyecare professionals, we have an obligation to protect our patients and our staff from infection while in our offices. Infection in an ophthalmic practice may be transmitted in a myriad of ways: patient to staff, staff to patient, between patients, and among staff by direct contact, airborne transmission, or from contaminated equipment or instruments used in the practice. There are numerous opportunities where eyecare providers may be exposed to infection:¹

- Removal of foreign bodies
- Patients with ocular trauma
- Conjunctivitis
- Microbial keratitis
- Epilation for trichiasis
- Lacrimal irrigation
- Meibomian gland expression
- Contact lens fitting
- Patients who may become incontinent (including young children)
- Patients who disgorge in the office

Disinfection vs. sterilization

Eyecare workers should be familiar with the terms used to describe infection control procedures.

Cleaning is the removal of foreign material with water, detergents, or enzymatic products.² Instrument cleaning is essential because dried mucus, tears, tissue, or cosmetics may contain dangerous concentrations of



Instrument disinfection tray.

infectious organisms. Cleaning requires scrubbing of all instrument surfaces to remove debris. Isopropanol alcohol might be needed on insoluble deposits left on the surface.³ Isopropanol alcohol can damage some materials, so make sure it is compatible with the surface you're cleaning.

Disinfection refers to inactivating all pathogenic microbes but not necessarily all microorganisms; for example, bacterial endospores, fungi, or protozoa. Disinfection is usually accomplished using thermal (heat and water) or chemical methods.

Sterilization eliminates all viable microorganisms, including bacterial spores. Sterilization usually requires autoclaving, a process involving exposure of the instrument to high temperature and pressure.²

Reprocessing of an instrument is the process of cleaning and disinfection and/or sterilization of a reusable device.

A *hygienic* state is a state of cleanliness that offers little or no threat to health, while sanitary

conditions are those that are physically clean and healthy.³

How to prevent infection

To start with, wash your hands—frequently. Many eye diseases are transmitted by manual contact, and it is the responsibility of all healthcare professionals to practice effective hand washing both before and after patient contact. Hand washing is considered to be the most important measure in preventing the spread of infection in the healthcare setting.⁴ The prevalence of infection decreases as hand hygiene is improved.⁵ Use an antimicrobial soap. Non-antimicrobial soaps can become harbinger of Gram-negative bacteria.⁶

What about alcohol-based hand rubs and gels? While they are more effective at encouraging ophthalmic workers to clean their hands between patients, they are poor antimicrobials.⁷ When using an alcohol-based hand rub, the Centers for Disease Control (CDC) recommends that the hands should be rubbed until dry,



Dr. Bowling is chief optometric editor of Optometry Times.

ensuring the entire skin surface of the hands and fingers are covered with the hand rub.⁸ Hand rubs are not recommended for use with contact lenses because residual debris and bacterial toxins on the hands and chemicals from the hand rub may be transferred to the lens prior to it being placed on the patient's eye. Wash your hands when working with contact lenses, and anytime the hands are visibly soiled.

Use personal protective equipment. All healthcare workers should use appropriate barrier precautions to prevent exposure when coming into contact with blood or other potentially infectious materials (this does not include tears, unless blood is visible in them).⁹ All practices should have powder-free surgical gloves available. The powder found in powdered examination gloves is potentially toxic and is a known carrier of latex allergen particles.¹⁰ Remember that latex gloves are not suitable for everyone. Latex allergy occurs in 4.3% of healthcare workers and in 1.4% of the general population.¹¹ Consider latex-free nitrile gloves as an alternative, which I prefer to eliminate the possibility of causing a latex allergy in my patients. Gloves are also recommended if you may come into contact with cleaning solutions. Remember, the use of gloves does not replace hand washing, and hands should be washed before and after using gloves.

During procedures where there is a potential for splashing, splattering or spraying of blood or body fluids or the potential for airborne infection, safety glasses, face shields, and masks should be used. Surgical masks are advised if either the eyecare profes-

sional or the patient has a cold or influenza.

It may be necessary to handle the eyelids or surrounding facial tissue during an exam, which could expose the examiner to potentially infected surfaces. Effort should be made to minimize tissue contact by using gloves, finger cots, or no touch techniques involving the use of cotton-tipped applicators.⁹ Needles are purchased sterile and disposed of after use. To prevent infection, any injection site should be disinfected with an alcohol wipe before the needle is inserted. Precautions must be taken to prevent accidental stick injuries from needles or other sharp instruments. Once used, needles should not be bent, broken or recapped by hand. Disposable syringes, needles, and other sharp items must be placed in appropriate infectious waste containers for disposal. Sharps must be discarded in clearly labeled, puncture-proof containers. There are collection services available to dispose of infectious waste and sharps containers.

Contact lens disinfection

Ideally, trial contact lenses should be for single use only. Today's single-use soft disposable lenses have practically eliminated the need for disinfecting trial soft contact lenses. Soft contact lenses can be disinfected with an approved hydrogen peroxide system.¹² Hydrogen peroxide disinfection is the only system approved by the CDC for the disinfection of HIV.¹³

Rigid gas permeable lenses are a different matter. The following procedure is recommended for cleaning these lenses:¹⁴

- **Clean contact lens with**

approved gas permeable (GP) cleaner via digital cleaning (20 seconds per side). Rinse with sterile preserved/aerosol saline.

- **Gas permeable (GP) lenses can be disinfected using a commercially available hydrogen peroxide system approved for use with soft contact lenses. Soak in 3% hydrogen peroxide for a minimum of three hours. Rinse with sterile preserved/aerosol saline.**
- **Dry GP lens with a clean tissue and store in a dry container. There is significantly less risk of contamination during dry storage compared to long-term storage in conditioning solutions.¹⁵**
- **GP lenses must be thoroughly cleaned and rinsed once again prior to reuse.**

Instrument disinfection

All instruments that come in contact with the patient's ocular surfaces, such as tonometers, gonioscopy lenses, and fundus contact lenses, should be wiped clean and thoroughly disinfected and/or sterilized as appropriate after each use. Single-use instruments and equipment should be used whenever possible in the ophthalmic practice, but several items are reused. All reusable instruments need to be cleaned immediately and then disinfected or sterilized, depending on the intended use.

Applanation tonometer probes are the most common item in the exam room that regularly contacts the cornea and tears of patients, so steps must be taken to ensure they

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Infection control

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are adequately cleaned and maintained. They should be cleaned before and after use. The instructions from the manufacturers of Haag-Streit tonometer (Goldmann) do not recommend exposing the tonometer prism to alcohol.¹⁶ Two reports have noted isopropyl alcohol, although effective in removal of viruses, may damage Goldmann applanation tonometer tips over time.^{17,18} The manufacturers advise removing the prism and cleaning with mild soap and cold water (due to the potential for *Acanthamoeba* contamination of water supplies, use sterile water/saline), followed by a soak in 3% hydrogen peroxide solution for 10 minutes. The prism is then rinsed thoroughly with sterile saline, dried with a tissue, and stored in a clean, dry container. Alternative solutions are listed on the Haag-Streit Web site.¹⁹ The tip of a digital pneumotonometer or tonopen should be covered with a disposable latex cover that is discarded after use.

Disinfection of gonioscopy lenses usually mirror tonometry guidelines, but also consider the manufacturer's instructions. The manufacturers of the Volk gonioscopy lens recommend cleaning the entire lens using a mild cleaning solution (such as diluted dishwashing liquid) and a clean soft cotton cloth.²⁰ The lens is then disinfected with either 2% aqueous glutaraldehyde or 1:10 dilution of sodium hypochlorite/household bleach, using fresh solution each time the lens is disinfected. Position the lens on its side, then immerse the entire lens in the solution for 25 minutes. Remove the lens from the

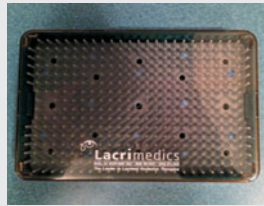
solution and rinse thoroughly with room temperature water (again, I prefer sterile saline), then dry with a soft, lint-free cloth. Both sides of the anterior glass element and the inside

of the ring should be cleaned with Volk Precision Optical Lens Cleaner. Following disinfection, the gonioscopy lens is stored in a closed case or container.

Fundus lenses should be cleaned with mild detergent and water and air-dried or dried with a lint-free cloth. If you suspect the lens has become contaminated, the lens should be disinfected according to manufacturer's instructions. The Volk lens fundus lens cleaning procedure mirrors that of the gonioscopy lens.

All offices should adopt practices to decrease the risk of transmitting an infection.

Boiling is not an acceptable method for sterilizing equipment, neither is the use of ultraviolet light. A small tabletop steam autoclave unit is the most efficient and cost-effective method of in-office sterilization. Items requiring sterilization should be properly prepared by wrapping in peel pouches before sterilization to maintain instrument sterility after processing. Recommendations for steam sterilization require a minimum of 15 minutes at 121°C. Instruments should be cleaned before sterilization and should be dry when removed from the autoclave.²¹ Autoclaves



Instrument storage tray and Sani-Cloth wipes.

are fairly expensive pieces of equipment and are necessary in offices where work is performed on sterile tissue or the instrument comes into contact with blood or blood products.

Exam room and general office infection control

The exam room should be regularly disinfected. Where the patient comes into contact with examining equipment, wipe the counter surfaces and areas with isopropyl alcohol tissues, 30% alcohol solution, or sodium hypochlorite solution (a 1% solution can be obtained by a 1:5 dilution of 5% household bleach), although some surfaces may be damaged by alcohol. I like this step to be done in front of the patient, so he can see the steps being taken in the office to control infection.

One often-overlooked item of possible contamination is the diagnostic eyedrop containers. External rims of bottles (i.e., anesthetic, mydriatic, Fluress, contact lens solutions, and saline bottles) may become contaminated. Technicians should ensure the bottle tip never touches the patient's eyes or the technician's hands, and the bottle cap should be replaced immediately after use. One other tip: ensure the eyedrop has not reached its expiration date. I know this sounds like a

no-brainer, but sometimes rarely used bottles can sit on the shelf and expire if there isn't someone to keep check. It is a good idea to mark on the bottle the date it was opened.

Infection control also includes regular and effective cleaning of all areas of the practice, using plastic liners in wastebaskets, proper disposal of waste, and vermin control within the office. There should be regular cleaning of all surfaces. Cover your equipment. If you use computer keyboards or iPads in your exam room, wipe off the keyboards with a disinfecting cloth. The same goes for the bench surfaces and exam chairs and equipment.

Conclusion

All offices should adopt practices to decrease the risk of transmitting an infection. Every office should have a protocol for hand-held instrument cleaning, as well as preventing patients and staff from acquiring an infection. By adopting universal infection control precautions as a routine aspect of eye care, eyecare providers, patients, and staff are at extremely low risk of contracting blood-borne or air-borne infections. ▀

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Communicable diseases in an eyecare office

Patients can walk in the door with a variety of communicable diseases. They include:

- human immunodeficiency virus (HIV)/acquired immune deficiency syndrome (AIDS)
- Hepatitis A, B, and C
- Tuberculosis
- Measles
- Mumps
- Rubella
- Chicken pox
- Shingles
- Mononucleosis (glandular fever)
- Herpes
- Influenza
- Impetigo
- Infectious conjunctivitis and keratoconjunctivitis
- Adenovirus

TROUBLESHOOTING OPTICAL COMPLAINTS

HOW TO KNOW IF THE PATIENT NEEDS A REFRACTION CHECK

By Laurie Pierce, LDO, ABOM

There is no doubt that optical errors adversely affect patient satisfaction and practice success. It can be confusing whether a visual problem is due to an optical error or if a patient needs to see the doctor for a refraction re-check. The reality is, while we often send a patient back to the doctor, the error is usually optically related. Even worse, doctors may feel pressure to tweak the Rx to please the patient.

The best way for technicians and opticians to know whether the patient actually needs to see the doctor for a re-check is to go through an optical checklist.

An optical checklist

For starters, does the work order match the doctor's prescription? We are used to retaining the patient's prescription and attaching it to the back of our job ticket or work order. Then, when the job comes back from the lab for verification/dispensing, it is all too easy to look at the written Rx on our job ticket for verifica-

tion of accuracy. We don't retain the patients' Rxs to keep them in our office and to keep them from going somewhere else—we keep them so that we can check the accuracy based on the doctor's written instructions. When we verify the accuracy of the prescription based on our job ticket, we will not know if there was an error in transcription, and the job could slip through to the patient.

When troubleshooting a problem, consider whether the Rx was modified for vertex distance or slab-off prism; whether it should have been modified for vertex or slab off; and whether the glasses were made correctly.

When troubleshooting, check:

- Sphere, cylinder, and axis
- Add power
- Prism
- OC placement (both vertically and horizontally)
- Base curves
- Tints, coatings, and filters
- Waves or warpage
- Vertical imbalance
- Unwanted prism
- Power at 90 degrees (to check for vertical imbalance problems)
- Power at 180 degrees (to check for unwanted prism induced due to a decentration error)
- High tech lens material (different Abbe value?)
- Asphericity (requiring a flatter base curve?)
- Buyer's remorse?

If the patient states that he or she has blurred distance, blurred near, or blurred peripheral vision, what should you do?

Handling blurry vision

One of our major challenges is discerning the optical cause of a problem when our patients say that they "can't see." It is up to us to know the difference between a genuine optical problem and a problem of adaptation. For example, when a patient says that she can't see, we need to ask more questions and dig deeper. One way to do this is to ask the patient, "Do you mean it is blurry as in 'blurry', or blurry, as in 'clear, but wavy, distorted, the floor feels like an ocean?'" Asking for clarification helps you to better discern the cause of the problem.

If a patient responds that it is definitely blurry, next I would do a configuration test. The way the lenses are configured (positioned) in front of the eyes can make all of the difference in the world. Ask the patient to move the eyewear up and down, in and out, and with more/less tilt. Years ago, this is how we dispensed cataract glasses—the patient would move the eyewear around in front of his eyes until the vision improved, and we would adjust the glasses exactly as the patient had them positioned.

When in doubt, there are three magic adjustments that will help alleviate peripheral distortion:

- Decrease vertex distance

Magic adjustments

When in doubt, try these three magic adjustments to help alleviate peripheral distortion:

- Decrease vertex distance
- Increase pantoscopic tilt
- Increase face form/wrap



Laurie Pierce, LDO, ABOM, is an instructor in the optician program at Hillsborough Community College in Tampa, FL. Contact her at 813/253-7433 or lpierce@hccfl.edu.

- Increase pantoscopic tilt
- Increase face form/wrap

Imagine that the distortion (aberration) is like the right and left sides of a window sill. By bringing the distortion/aberration closer (decreased vertex distance), tilting it downward (increased panto), and wrapping it (increased face wrap), the blurred area will be placed outside the patient's field of view. The distortion/aberration still exists (in a PAL, for example), but it disappears in the patient's perspective. In my opinion, most people are walking around with eyewear that needs more tilt and wrap. This simple adjustment will solve many optical complaints.

Another example: Let's say that a progressive lens wearer comes in complaining that, while her vision is good at intermediate and distance, she has to hold reading material to the extreme left. It is clear she is not looking through the nearpoint reading area. What should you do?

Do not send the patient back for a refraction recheck. The fact that the patient said she can see clearly in the distance and intermediate is proof that the prescription is accurate. The problem is at near.

Try this tip with a near vision problem:

1. Take a flat mirror (about 8 inches square) and, using a Sharpie marker, make a dot in the middle of the mirror.
2. Place the mirror on the dispensing table, between you and the patient, at the patient's near working distance.
3. Place all of the markings back on the PAL lenses, and put them back on the patient, verifying a proper adjustment.

Troubleshooting checklist

When addressing patient eyewear complaints, go through this checklist before sending the patient back to the doctor for a refraction check.

- Sphere, cylinder, and axis
- Add power
- Prism
- OC placement (both vertically and horizontally)
- Base curves · Tints, coatings, and filters
- Waves or warpage

4. Ask the patient to look at the dot in the center of the mirror, keeping her head straight, as if she were reading a book through her PALs.
5. Stand up, look into the mirror and look at your patient looking at the dot in the mirror.
6. Determine if your patient is actually looking through the near-point circle markings (chances are, she is not).
7. Now, proceeding with caution (to avoid inking your patient's face by mistake), carefully mark the lenses where the patient is actually looking. This will give you the subjective measurement for her nearpoint PD requirements.
8. Order the lenses from the lab with the markings on, and ask the lab to make the lenses with the near PD at the markings, and to outset the distance PD from the specified reference point. This will work with the majority of prescriptions, with the exceptions of very strong prescriptions (over ± 7.00 D), and unbalanced prescriptions (optical difference of 1.50 D or more, as in anisometropia and antimetropia).

- Vertical imbalance
- Unwanted prism
- Power at 90 degrees (to check for vertical imbalance problems)
- Power at 180 degrees (to check for unwanted prism induced due to a decentration error)
- High tech lens material (different Abbe value?)
- Asphericity (requiring a flatter base curve?)
- Buyer's remorse?

While this example is not mainstream, it does occur. Not everyone converges downward and inward at near the same amount. Sometimes a patient has a specific turning of the eye, like cyclodextro phoria, a condition in which the eyes do not converge downward and inward at a range within normal limits. In this case, the lenses need to be fabricated specifically for the patient's unique reading levels.

With all of the challenges of keeping up to date with new innovations in lens and frame technologies, it is easy to forget important optical concepts that we don't see every day. In addition to knowing how to compensate for and calculate slab-off prism, we need to know how to compensate for vertex distance in higher-powered lenses and correct base curve selection.

These optical concepts are even more important with high refractive errors/strong prescriptions that are more common than we think. Taking the extra steps to uncover and correct these optical challenges will help out a lot of patients we may have otherwise missed. It is worth the extra effort. ▀

BECOMING AN OPTOMETRIC TECH

MY JOURNEY AND EDUCATION TO EARNING CPOT

By Jackie Hoffman

My name is Jackie Hoffman and I began my career in January 2012 at Madelia Optometric, owned by Viktoria Davis, OD, who has been an optometrist for nearly 15 years, in Madelia, MN, a small town of approximately 2,000 people. It is a small practice—I am the only full-time staff member, with two part-time employees.

A little background

I grew up near New Ulm, MN, on a farm with my parents and my three younger siblings. I graduated high school in 2006 and started college at Southwest Minnesota State University, where I was honored with nomination into the National Society of Leadership and Success. After 1 year there, I gave birth to my son Skyler, and I decided to take a year off school. In 2010, I earned an associate's degree in administrative assisting, graduating summa cum laude from South Central College.

About a year later, my grandfather passed away, and I decided that I needed a change. I had always told him that when he got old, I would take care of him—I wanted to show him that I could do so with others. I went back to school at South Central College and became a certified nursing assistant. I was working at a nursing home and continued classes to become a health unit coordinator. Shortly before I graduated in 2011 with

the certificate, Dr. Davis called me. I saw her for optometric care, and little did I know that she had been considering me for some time for her next open position. I accepted her offer and have worked in her practice for the past 2 years.

Learning the ropes

Before working at Madelia Optometric, I had no experience in the optometric field. I've worn glasses since I was in fourth grade, so I'm familiar with an optometry office, but now it's exciting that I'm behind the scenes. When I first started, I began with the general office tasks of answering the phone, scheduling appointments, and setting up charts for the following day. On the optician side, I helped patients choose their frames and ordered the lenses through our lab's Web-based interface. I also learned to use a lensometer to verify spectacle lens prescriptions.

Getting an education

Dr. Davis is an advocate of paraoptometric education—she successfully mentored previous staff members through the CPO (certified paraoptometric), CPOA (certified paraoptometric assistant), and (certified paraoptometric technician) CPOT exams as well as serving as the board liaison to the Minnesota Optometric Association Paraoptometric Section. However, the office was getting too busy

for her to be able to teach another staff member. Through our electronic health records provider, RevolutionEHR, Dr. Davis learned of the online paraoptometric technician program offered at Madison Area Technical College (MATC).

The optometric technician program at MATC is a one-year, 27-credit technical diploma offered onsite in Madison, WI. However, the school also offers an online program for those currently working in the field. Working full time, it is a 2-year program (taking two to three classes per semester) and requires an onsite mentor to supervise hands-on training. After graduating and receiving my technical diploma, I will be able to take the CPOT written examination. Once I have passed that exam, I will become a certified CPOT. The MATC program allows successful graduates to bypass the CPO, CPOA, and CPOT practical examinations.

What I'm learning

I began classes in January 2013, and I am about to complete my second semester. During the first semester, I took Optical Dispensing 1, which included an overview of different lens materials, frame types and parts, and adjusting frames; and Basic Optical Concepts, which included conversions, hand neutralization, working with the lensometer,

See **Journey** on page 12



Ms. Hoffman works in Madelia, MN. She is halfway through a 2-year optometric technician program at Madison (WI) Area Technical College.

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Journey

Continued from page 10

and calculating and transposing prescriptions. The first semester was a bit of a challenge because it had been over a year since I had taken any online classes. Thankfully, my two classes were easier because I already had one year of experience under my belt. A couple of my classmates had more experience, and others were fresh into the field. I was able to help my inexperienced classmates. After the first semester, I was named to the Dean's List for the 2012-2013 spring semester.

This semester, I am taking Ophthalmic Pre-Testing, which includes working with patients by reviewing their case histories, measuring visual acuities, entrance testing, keratometry, and checking blood pressure; and Ocular Anatomy, which consists of learning more detail about the eye. Thus far we have learned basic terminology, eye embryology, bones of the orbit, the lacrimal system, conjunctiva, tear film, eyelids, cornea, pharmacology and common eye diseases, the uveal tract, sclera, iris, DPAs, ciliary body, crystalline lens, vitreous, and choroid. We have yet to learn more in depth about the retina, extraocular muscles, optic nerve, and the visual pathway. Starting in January 2014, I will be taking Contact Lenses and Patient Relations.

I am excited to start my next semester, even though I have to again juggle a full-time job, a family, and a home. But, in the end, it is all worth it. Through all my classes, Dr. Davis has been extremely supportive and helpful. She allowed me to put my new

This program has given me the willingness to achieve, and even though I'm working full time, going to school, and raising a family, I can do it — and anyone else can, too. Little did I know that my optometrist had been considering me for some time for her next open position.

knowledge to work almost immediately and is always willing to answer questions and provide guidance.

Looking back

After taking a look back over the last year, I have learned so much that it is hard to write everything down on paper. This program has given me the willingness to achieve, and even though I'm working full time, going to school, and raising a family, I can do it —and anyone else can, too.

Patients often ask me if I have to take classes to perform some of the measurements, and I tell them becoming certified in this field is, in a way, comparable to becoming a nurse. Nursing encompasses different levels of certification, from LPN to RN; similarly, there are several levels to becoming a certified paraoptometric. I have essentially completed the CPO, and after

this year, I will have finished the equivalent of the CPOA. The CPOT is the highest level of training that an optometric technician can receive. I also tell patients that all of my coursework is online, and I have hands-on labs with my mentor Dr. Davis at the office.

Now almost 2 years later, I am becoming more of an assistant to Dr. Davis by starting patients off in the automated testing room, where I collect data from our autorefractor, keratometer, and topographer. Also, I use the visual field instrument to check the patient's peripheral vision. I will also obtain the patient's height, weight, and blood pressure. I will then take him to the exam room and begin to ask about general health, medications, and past medical and ocular history for himself and their immediate family. I will then finish with checking visual acuities for both distance and near.

In our optical area, I am the sole person to ask about different lens packages and frame prices. I am the frame expert in not only choosing frames for patients but also ordering and keeping up with the inventory. Every 6 months, I review our inventory and exchange our frames for newer styles and colors; I want to keep our inventory new and fresh for our patients.

It wasn't too long ago that I did not know anything about the optometric field, and now by going through the training process, I am learning everything. It is such a great feeling. I am grateful to my mentor, boss, and friend Dr. Davis for giving me this wonderful opportunity to advance my skills and become a certified paraoptometric technician.■

MAKE YOUR OFFICE ELDERLY FRIENDLY

KEEPING YOUR PATIENTS COMFORTABLE AND RELAXED LEADS TO A BETTER PATIENT EXPERIENCE

By Jean Wrightnour, OD

For many ophthalmic practices, the elderly make up a large portion of the patient base. Ensuring that your office is elderly friendly keeps these older patients more comfortable during their visits and more likely to return as well as to refer others.

The majority of my patients are Medicare recipients, and I've found that tailoring my office to their needs increases their comfort level. A comfortable patient is more relaxed, and the examination goes much more smoothly with a relaxed patient.

Most of the suggestions I offer here to improve your practice for the elderly are simply common sense.

Office design

From the moment your older patients arrive, they should feel welcome.

Ensure that you have enough clearly marked handicapped parking spaces. Your walkways should be wide enough to accommodate walkers and wheelchairs. Sidewalks and parking lots must be well lit.

All doorways, exterior and interior, should be wide enough for walkers and wheelchairs. Install handrails in the bathrooms.

See **Elderly** on page 14

Keep your elderly patients comfortable

Your office can welcome older patients by following these suggestions.

General office

- Enough clearly marked handicapped spaces
- Walkways wide enough for wheelchairs
- Well-lit parking lots and sidewalks
- Doorways wide enough for wheelchairs
- Handrails in the bathroom
- Reception desk height appropriate for wheelchairs
- No loose rugs; tacked-down carpeting
- Schedule early in day
- Exam forms with enough space to write, font easy to read
- Bathrooms stocked with toilet paper

Communication

- Talk low and slow
- Take time to explain
- Use models or charts
- Use printed summaries
- Face the patient when speaking
- Listen when patients are speaking
- Avoid patients feeling like they are a bother
- Be kind

During the exam

- Describe exam process prior to start



- Narrate steps of the exam
- Keep distractions out of the exam room
- Allow enough time for the exam
- Encourage the patient throughout exam

Optical

- Keep things simple
- Offer frame choices similar to what patient is wearing
- Gauge what patient might like
- Older patients may like trendy frames
- Offer second pairs
- Amber tint cuts glare and enhances contrast for patients with cataracts

Dr. Wrightnour is in private practice in Ashtabula, OH.

Elderly

Continued from page 13

Reception

Be sure the height of your reception desk isn't too high for patients in wheelchairs. Tack down the edges of carpeting and avoid loose rugs to keep safe patients using walkers or crutches.

Aim to schedule the elderly earlier in the day when your office may not be as busy. Plus, many older people are early risers and will appreciate an earlier time slot.

When designing exam forms, allow enough room for old hands to enter information and be sure the type is large enough for old eyes to clearly read.

Be mindful that elderly patients move more slowly than their younger counterparts. No need to rush them—they already know that they are slow. Simply saying, "Please don't rush. There's no hurry, and we have plenty of time," can be comforting to elderly patients. Staff should also be alert if a patient is not steady on her feet and may need help sitting, standing, or walking from room to room.

Be sure bathrooms are well stocked with toilet paper. Many older people take diuretic medications, requiring frequent trips to the restroom.

In the exam room

When preparing patients for the examination, remember that elderly patients frequently have hearing problems. I suggest talking low and slow—high registers in hearing are lost as people age. Women have higher pitched voices, and voices tend to go higher when speaking quickly. Speaking slower and in a consciously lower tone—think the bottom of your

voice—helps to enhance communication. Low and slow can replace loud, which is exhausting for the doctor or staffer speaking for the patient and irritating for others to hear. In addition, speaking loudly may cause patients to think you are yelling at them, which in fact you are.

I emphasize to my staff that we all tend to talk and move fast, and you can't with elderly patients. You have to really slow down.

When communicating with elderly patients, use correct terminology, then use terms to better explain what you're trying to say. Try using models or charts during your conversation to visually convey concepts. Printed summaries are another good idea, provided that the font is large enough for the patients to read. Also, sit facing elderly patients when speaking to them. This allows them to "see" what you are saying as well as hear you.

Prior to the exam, describe the steps of the exam so the patient knows what to expect. The doctor should narrate the steps of the exam as well as he or she goes through the process. Many times patients don't know that the doctor just examined the patient's crystalline lens to determine what type of cataract she has, for example. A short sentence or two will help patients understand what's happening—and understand the value of the

exam as well.

Try to keep distractions out of the exam room. Music, interruptions, noise from the hallway, and extra people in the room add clutter to the process.

Allow the doctor enough time to examine elderly patients without interruption. During the exam, staff or doctor should encourage the patient, especially during refraction. For example, say, "Great job on that!" or "We're about halfway through, and you're doing a great job."

In the optical

Your best move when helping older patients while in the optical is to keep things simple. During frame selection, offer a few choices similar to what the patient is currently wearing, then try to gauge what she might like. Keep in mind that just because a patient is 85 years old doesn't mean she might not want a frame with color or bling, which is on trend today.

Don't neglect discussion of second pairs. Plus, I've found that an amber tint greatly helps to cut glare and enhance contrast, especially if the patient has cataracts. A tint can continue to help even after intraocular lens (IOL) implantation.

People skills

Listen to what patients are saying to you. Take the time to slow down and pay attention to what they say.

Smile. Make eye contact frequently with patients. Meet patients' needs without them feeling like they're a bother to you or you don't have time for them.

Above all, our office mantra is to be kind. Treat patients how you would like to be treated. ▀

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