National Academy of Opticianry

Continuing Education Course

Use SOAP to Solve Eyewear Problems - Part 1

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Use SOAP to Solve Eyewear Problems - PART 1

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Course: Spectacle – 1 hour

Level: Basic to intermediate

Description:

This article is intended to expand the optician's knowledge and improve his/her ability to provide superior eye care.

Objectives:

Upon completion of this program, the participant should be able to:

1. Have an understanding of the SOAP sheet, break it down into its four categories, and know how to use it to help problem solve patient vision complaints.

2. Know the steps to take and in what order, to get to the root of the problem.

3. Have a better understanding of ocular and medical issues that can affect visual acuity.

NOTE: It is not the intention of the author to encourage opticians to step outside their scope of practice as determined by the licensing regulations of their State. This article is intended to expand the optician's knowledge and improve his/her ability to provide superior eye care. The author in no way promotes medical diagnoses being made by the optician. In addition, the optician should always discuss findings with the prescribing doctor prior to making any changes to the prescription.

How often have opticians heard the words, "I can't see through these?" To be successful the optician must possess the optical and medical knowledge to be able to assess and evaluate the specific problem the patient is having, to know the appropriate steps to get to the root of the problem, and most importantly, to advise, educate, and counsel the patient. Is the poor acuity simply a case of requiring additional adaptation time? What was the best corrected visual acuity (BCVA) determined by the doctor? How well can the patient expect to see? Does the patient have medical conditions that could be affecting acuity? Is this a first prescription for the patient? Is this a first multifocal for the patient? How much change has there been in the patient's prescription?

All these questions and more will be discussed in this two-part program, together with details of real patient situations and the steps taken to find a resolution.

Let's set the scene . . .

In the first scenario, the patient is here for the final dispense of his/her glasses which have been carefully adjusted to fit perfectly (refer to April 2010 "Lens & Technology – The Well Adjusted Frame" and the continuing education program "Getting Adjusted"). The patient then utters those words every optician dreads . . . either "I can't see through these," "I can see better with my old glasses," or "I can see better without them on." An alternate scenario would be the patient returning to the office with similar complaints after wearing his/her glasses for a period of time. In either scenario, to resolve the patient's problems, the optician has to now switch roles to that of a detective. Through the use of interview techniques and optical and medical knowledge, the skilled optician can begin the process of getting to the root of the patient's difficulties.

SOAP sheet

S.O.A.P. is an acronym for "Subjective, Objective, Assessment, Plan." The SOAP approach is the basis for most medical evaluations and the approach used by Optometrists and Ophthalmologists during the eye exam. Create a SOAP sheet for documenting the patient's problems with his/her glasses. This will aid in gathering clear and concise details which will ultimately help the optician and doctor in resolving the patient's complaints.

The categories should be as follows:

Subjective: The patient's chief complaint
Objective: The optician's evaluation which should include all the steps taken during the evaluation process
Assessment: The optician's findings
Plan: The plan based on the findings.

Example of SOAP Sheet for Problems with Glasses

Patient Name: _____ Date: _____

Original Exam Date: _____Dr: _____Glasses Dispense Date: _____

S: Chief Complaint:

O: Rx Verification:

Seg height measured from lenses: **PD measured from lenses:**

BC: **OD: horizontal: +** **vertical: +**

OS: horizontal: + **vertical: +**

Previous glasses information (if available):

Rx Verification:

Seg height measured from lenses: **PD measured from lenses:**

BC: **OD: horizontal: +** **vertical: +**

OS: horizontal: + **vertical: +**

A: Assessment:

P: Plan:

Optician:

The Approach

There is a specific order in which the steps to get to the root of the problem should be taken:

S = Subjective

Step 1: Investigate the patient's specific complaints. For example, is the patient experiencing distance problems, near problems, problems at all distances, a pulling sensation, the "goldfish-bowl" effect (swimming sensation), or distortion of horizontal, or vertical objects. Is the vision poor on an intermittent or constant basis? If intermittent, under what circumstances is it noticeable? Has the vision always been the same since receiving the new glasses, or has the patient noticed a gradual decline? Some of these questions would only apply if the patient was returning with problems, not problems noticed at final dispense. The optician must ask open-ended questions to help the patient open up to them. Some patients have difficulty articulating their specific problems – they just know something is not right. Remember, unless dealing with an engineer - in which case, good luck – most patients are unaware of all the variables involved in making their eyewear and how these variables can occasionally cause problems. Show compassion and help the patient feel comfortable expressing their concerns. Many patients feel like they're complaining which can put them on the defensive. Showing you truly care and want to resolve their problems will make them feel at ease. It will form a long-term connection between the patient and optician that can lead to building a reputation in your community for being a true professional who cares about taking care of the patient throughout the entire process and providing outstanding eye care.

O = Objective

Step 2: Recheck the adjustment and make sure the glasses are fitting well. Ensure the appropriate amount of pantoscopic tilt is applied to the frame – typically 5 to 15 degrees (figure 1). The nose pads should be adjusted to keep the loop of the pad arm small to keep the distance of the frame lower rim to the face, to a minimum. This is especially important in the case of a multifocal to ensure a smooth transition from distance to near and to provide good acuities at all ranges. The frontal angle, splay angle, and vertical angle should be adjusted to ensure optimum comfort and vision (figure 2).

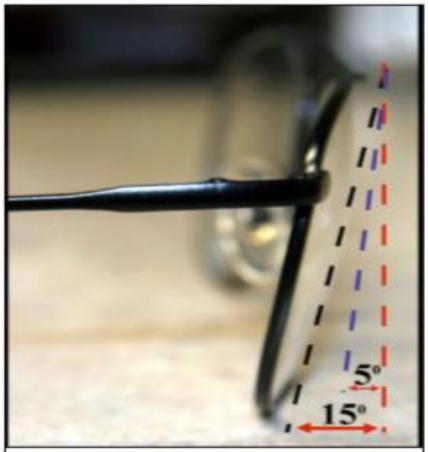


Figure 1: Pantoscopic Tilt Extremes

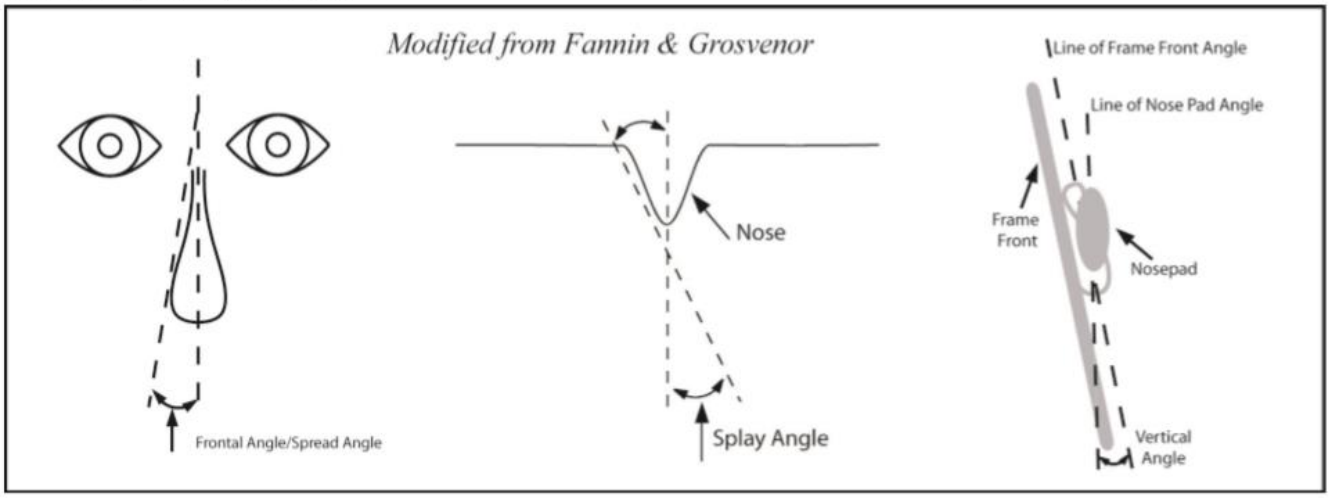
Step 3: Re-verify the lenses to the doctor's written prescription, as opposed to the order written up by the optician. If the patient has brought his/her old glasses, neutralize them to compare to the new. In addition to verifying PDs, OC heights, segment heights, and base curves of each. Measuring the base curve of a progressive lens is difficult due to its natural asphericity, especially with today's free-form designs. Placing the lens clock vertically on the lens along the progressive zone will give a ballpark reading to at least compare pairs. Similarly, if the lens is an aspheric design, a precise base curve is difficult to obtain using a lens clock.

Common errors to re-verify:

- Make sure the numbers weren't transposed, or misread;
- Make sure the signs were written correctly;
- Compare the written prescription to the manifest refraction (See Side Bar); look for any major variations.

Compare the written prescription to the patient's old prescription, if available. Unless the patient has had ocular surgery, a dramatic change in the prescription is irregular and definitely raises a red flag as a possible reason for the complaint. A significant change in prescription can result in increased adaptation time.

Figure 2: Nose pad Adjustments



Step 4: Determine the patient's Best Corrected Visual Acuity for distance and near, typically recorded by the doctor on the examination report. Entry acuities are also useful at this point to help determine how the patient was seeing either uncorrected or habitually using their old correction. It is beneficial for the optician to become fluent in interpretation of the examination report for purposes such as these and to be able to more competently answer the patient's questions. However, all medical questions should be referred to the doctor. If unsure, or items are unclear, request a few minutes with the doctor so they can explain the meaning behind all the areas on the examination report. The doctor will usually appreciate the optician wanting to increase their knowledge and thus enable the optician to more frequently problem-solve patient issues, and hopefully reduce the number of return visits to the doctor for re-checks.

If the patient's BCVA for distance and/or near is less than 20/20 there may be medical issues with the eyes that contribute to the reduced acuities. Once again, the optician should always exercise caution to remain within the boundaries of his/her scope of practice. If the prescription is from an outside doctor, a call to the doctor would be recommended at this point to obtain a history, or at least the BCVA expected. Such conditions that could result in a reduced BCVA include macular degeneration, cataracts, corneal irregularities, dry eye syndrome, amblyopia, and diabetes, to name a few.

Step 5: Evaluate how much change in prescription has taken place, and what the change is. If the optician is confident in trial lens over-refraction procedures, start with +0.25 and -0.25 over the distance zone using a flipper to see if the patient notices improvement. If the over-refraction doesn't improve things, and if nothing jumps out to the optician as an obvious reason for the problem – such as transposed numbers, or a misprinted prescription - it's time to refer the patient back to the prescribing doctor. If the patient is wearing a multifocal and the patient is experiencing poor near vision, a simple trial lens over-refraction over the reading area starting with 0.25 OU is a good starting point, plus or minus, depending on the specific complaint, again using a flipper. If the patient wishes their near working distance to be closer, increasing the add power will reduce the working distance, possibly improve fine detail work, but also narrow the field of view. If the patient is requiring their near working distance to be further away, reducing the add power will increase the working distance, make fine detail work more difficult and increase the field of view. Document the results of over-refractions and evaluations.

NOTE: In most States, refracting does not fall within the optician's scope of practice. However, the above over-refraction procedures are no different from those performed by opticians when fitting contact lenses and should not be confused with full refractions.

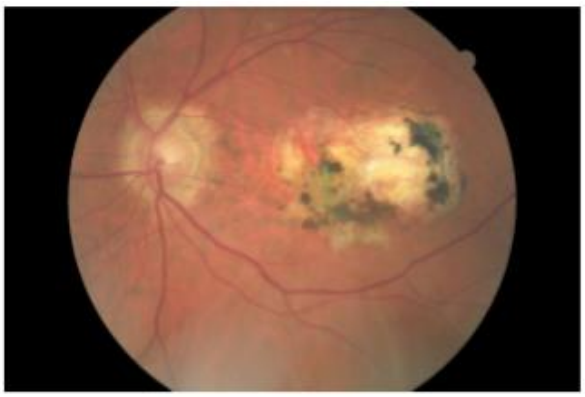
SIDE BAR: Manifest Refraction or 7A

This is one of the doctor's findings during the eye exam, based on subjective responses from the patient. Occasionally, the doctor may deviate from this in the finalized prescription based on the doctor's objective evaluation of the patient's responses throughout the entire exam. For this reason, it is never safe to assume the manifest refraction is the actual prescription. However, it is often close and can be referenced when checking for possible errors in the final written prescription. The manifest refraction is often referred to as "7A" which comes from a list of twenty one optometric tests dating back to the early days of optometry. The manifest refraction was number 7A on the list.

Ocular Medical Issues Affecting Acuity

NOTE: For information & education purposes only –<u>NOT</u> to be used for diagnosing purposes

ARMD or AMD



Age Related Macular Degeneration comes in two forms – wet ıe retinal tissue without fluid leakage. Wet AMD indicates leaking fluid beneath the retina, usually from abnormal blood vessel growth. Both forms damage the macula, the area responsible for central vision since it is the area of the

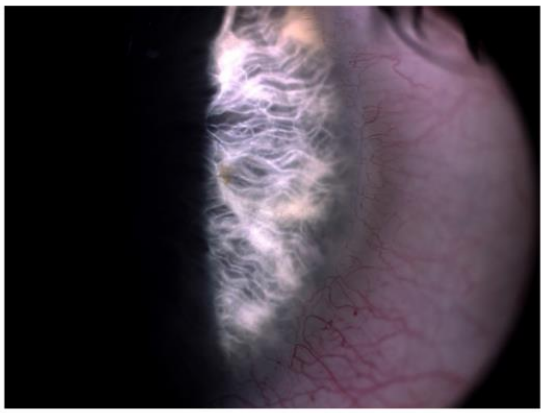
retina with the highest concentration of cones – light receptors present within the retina. If this area is damaged, the BCVA is reduced to less than 20/20. Vision from dry AMD can be anywhere from normal to very poor, while wet is usually associated with poor central vision. In both forms, peripheral vision generally remains intact, unless there is an additional ocular disease process involved.

Cataracts

Cataracts are opacities that form in the crystalline lens of the eye. This causes a reduction in contrast sensitivity and a reduction in BCVA to less than 20/20. Contrast sensitivity is a measure of the eye's ability to function in low light and how well objects can be distinguished from similarly colored or shaded backgrounds. As the cataracts mature the patient's BCVA becomes increasingly reduced. Cataracts can also cause monocular diplopia (double vision) due to internal light scatter within the crystalline lens. A patient will also typically become more myopic as the cataracts mature due to changes in the refracting properties of the crystalline lens. In some cases, however, the patient can become more hyperopic.

Corneal Irregularities

The cornea provides the most refractive properties of the eye. It is naturally avascular in order to maintain its transparency. If the cornea has any irregularities such as edema, neovascularization, irregular astigmatism, or keratoconus, this can affect the BCVA attainable.



Graphic: Corneal Neovascularization: Blood vessels extending from the sclera to the cornea

SIDE BAR: *Common Terminology*

Avascular: Lacking blood vessels

Edema: Swelling caused by trapped fluid

Neovascularization: Growth of new blood vessels

Irregular Astigmatism: Corneal astigmatism in which the refractive meridians are separated by an angle other than 90 degrees.

Regular Astigmatism: Corneal astigmatism in which the refractive meridians are separated by 90 degrees.

Keratoconus: A degenerative corneal disease in which the structure of the cornea deteriorates with gradual bulging from the normal round shape to a cone shape combined with corneal thinning.

Emmetropia: No refractive error present

Ametropia: Refractive error present

Dry Eye Syndrome

The healthy cornea is constantly kept hydrated by a continuous re-application of lubricating tears. There are two types of tears – natural lubricating tears and reflex tears. The natural tears possess the lubricating qualities necessary to keep the cornea hydrated and healthy. When patients have problems with dry eyes, either the patient isn't producing enough of the natural tears, or the trilaminar (three-layer) structure of the natural tears has some abnormalities. For example, if the outer lipid layer is inadequate, the middle aqueous layer can evaporate more quickly than normal. The reflex tears will then kick into action, often in excess, in order to compensate for the inadequacies of the natural tears. When patients complain of their eyes constantly tearing (epiphora), this can often be the cause. Ironically, too much tearing can be due to dry eye syndrome, a concept often difficult for the patient to comprehend. Clear vision is maintained by the cornea remaining hydrated and clear. If the cornea loses some of its hydration, this can cause blurring. Ask the patient if after blinking vision is improved, even temporarily. If so, dryness can be contributing to a reduced BCVA. Frequently, when patients are doing excessive work on a computer they forget to blink. Sometimes reminding the patient to occasionally look away from their computer will make a substantial difference to long-term quality vision. Remember the "20-20-20 rule": Every 20 minutes spend 20 seconds looking at something at least 20 feet away.

Amblyopia

Also known as "lazy eye," indicates a reduced BCVA in one eye. It is a congenital condition that can either be associated with a strabismus (turned eye) or a refractive condition. In the case of a patient with a strabismus, the turning causes the rays of light entering the eye to be focused on the retina at a point other than the macula. Stereopsis, or fusion of the two dissimilar images the eyes are receiving, is difficult for the brain and diplopia (double vision) can occur. To avoid this diplopia, the brain will often shut off the weaker eye, the good eye takes over, and the weaker eye fails to develop a strong connection with the brain and ultimately fails to develop a good visual acuity. The brain often reacts in a similar way when the amblyopia is due to a refractive condition. Anisometropia is a condition where there is more than 1diopter difference between the refractive errors of each eye; antimetropia is a condition where one eye is myopic and the other hyperopic. When there is a large amount of either of these conditions present, only one eye at a time can be perfectly in focus. Fusion of the two substantially different sized images becomes difficult for the brain; once again, it shuts off one of the eyes. Note: Typically, the ocular structures of the eyes are normal in a patient with amblyopia. It is a deficiency in the link between the eye and the brain that causes the reduced level of visual acuity in one eye.

Diabetes

Diabetes can affect vision in various ways. It can cause bleeding inside the eye - a vitreous hemorrhage - which can substantially reduce vision because, quite literally, it is hard to see through blood. Diabetes can also cause retinal ischemia – a general lack of oxygen throughout the entire retina, or large sections of it. Ischemia causes both reduced contrast sensitivity and BCVA. Proliferative Diabetic Retinopathy refers to neovascularization beneath the retinal tissue (new vessel growth), the eye's natural response in an attempt to remedy the ischemia. Unfortunately, the structural integrity of these vessels is poor and they often leak blood.

First Time Correction for Hyperope

An adult patient with hyperopia, or hypermetropia, will occasionally have adaptation problems with their first distance correction. Typically, the hyperope will have more difficulty adjusting to a first-time prescription than a myope. The hyperopic patient is used to being able to accommodate to overcome their hyperopia for distance work. However, as the patient evolves into a hyperopic presbyope, it becomes increasingly more difficult to focus up close. The patient appreciates the help up close, but if fitted with a distance prescription, or multifocal, occasionally will report the distance power feeling "too strong". An adaptation time of one to two weeks should be recommended before making changes, in order to fully evaluate the patient's acuities with the new prescription. This can easily be perceived by the patient as being "blown off" so it is important to educate the patient as to what they are dealing with. Reassure them that what they are experiencing is normal and that if things do not improve, changes can be made. It's important for the patient to know the optician will stand behind the product.

This completes the "Subjective and Objective" categories of the SOAP sheet. Part 2 will cover the final two categories, "Assessment and Plan." This will incorporate an in-depth discussion regarding how to interpret a patient's vision complaints to help determine the cause. In addition, it will cover accommodation and add power determination and calculation. Several real-patient examples will also be presented outlining the patient's vision complaint and the steps taken to resolve the problem.

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