A GAME-CHANGING APPROACH TO HELP OVERCOME CONTACT LENS DROPOUT

How point-of-care testing can grow your contact lens practice by aiding in lens selection, treatment recommendations and patient education.

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Contact lens dropout rates have not changed appreciably in nearly two decades. Although new materials and preservative-free products have helped, neither was the tipping point we hoped for in contact lens practice. What’s more, as clinicians, we now face even greater challenges than we once did. The explosion in digital device use has placed an unprecedented burden on the ocular surface, erecting yet another hurdle to comfort. If there is one thing we have learned about contact lens dropout, it is this: We are less likely than ever to overcome it using traditional strategies. It’s time to start thinking outside the box.

In our clinical experience, and in that of many of our forward-thinking colleagues, the most effective way out of what is otherwise sure to be a downward spiral is to catch as many patients as we can as they come in for their annual exams. In other words, we need to identify which patients are at risk of dropout prior to first fittings and before refits.

In this three-part series, we will explore how osmolarity testing can be the catalyst for change that the contact lens industry has long sought. This surprisingly simple approach is both practical and profitable. In this first installment, we will make the case for how point-of-care osmolarity testing can benefit your contact lens practice. We will also explore different ways you can integrate it into your practice routine. In parts two and three, we will explain how osmolarity can help guide lens selection, setting the stage for better patient education, less dropout and a better bottom line in terms of reimbursements.

STRATEGIES FOR TESTING NEW WEARERS

While many clinicians believe that osmolarity testing is most appropriate for monitoring disease progression, an even better use of tear osmolarity testing is to determine whether a patient has dry eye disease, especially in its early stage when other dry eye signs may give conflicting information. In a recent study by the National Health Service (Great Britain, UK), osmolarity was shown to have the highest positive predictive value for dry eye disease compared to other routine dry eye diagnostic tests. Furthermore, TearLab Osmolarity testing is not only the most predictive test for dry eye, it’s also the fastest, requiring fewer than 30 seconds from test to result.

There are several ways to approach dry eye diagnosis at an initial lens fitting. Some practices find that the best approach is to perform osmolarity testing on every new contact lens patient using the TearLab Osmolarity System while others wait to perform osmolarity testing pending other indicators, such as a poor score on a subjective questionnaire.

If your decision to perform osmolarity testing depends on subjective symptoms or surveys, bear in mind that dry eye disease is often asymptomatic—until the ocular surface is “challenged” by a contact lens, so adopting a protocol like this requires greater clinical diligence. In fact, research suggests that relying on symptoms to diagnose dry eye would produce a missed or incorrect diagnosis more than 40% of the time.

HOW TO APPROACH REFITS

Have 50% of your current lens wearers mentioned that they have dry eye symptoms? Probably not. Yet dry eye affects nearly 30 million
Americans—including 50% of all contact lens wearers. The “don’t ask, don’t tell” strategy is not working for the contact lens industry and largely explains why about 16% of contact lens wearers drop out every year.

A more proactive approach is clearly required. We suggest one of three options: Ask the right questions, perform diagnostic testing on all lens wearers or, better yet, do both. The following probing questions can help tease out information that will let you know whether a patient is at risk of dropping out:

- Do your eyes ever feel dry or uncomfortable?
- Are you bothered by changes in your vision throughout the day?
- Are you ever bothered by red eyes?
- Do you ever use or feel the need to use drops, especially after prolonged lens wear?

A yes to any of these is a red flag. But even if a patient reports none of these problems and is currently asymptomatic, osmolarity testing might reveal early signs of dry eye.

One of the most convenient aspects of the TearLab test is that it can be performed while wearing contact lenses. When this quick test shows that osmolarity is high, you can use this information to guide lens selection and treatment. And, since the TearLab provides an objective score—correlating well with severity—it helps encourage compliance with your recommendations. All you have to say is, “This test shows that your tear chemistry is out of normal range, which indicates that you have dry eye.” Then you can detail the steps you’ll take to lower the “score” and help patients understand why you recommend a certain lens option, such as a daily disposable modality, which may help with comfort. We’ll discuss this in greater detail in Part 2 of this series.

**SPECIAL CONSIDERATIONS FOR PRESBYOPIES**

Multifocal contact lens patients can be one of the greatest profit centers in an optical practice, but can also be one of the most challenging ones since this group is at particularly high risk of developing dry eye. On a case-by-case basis, success with a multifocal contact lens almost always hinges on ocular surface integrity. For this reason, we recommend that all patients who wish to be fit in a multifocal lens be tested first with the TearLab Osmolarity System.

If osmolarity reveals that there’s a barrier to successful wear, we treat it first, so we have the best chance of keeping the patient happy in their lenses. The osmolarity score also aids in setting realistic expectations with a multifocal lens. When patients know that their osmolarity score is too high, they’re less likely to conclude that multifocal contact lenses—or worse, your clinical skills—are to blame.

In some cases, when scores are high or there is significant disparity between the left and right eye, we may recommend shorter wearing times or simply waiting for the score to improve before moving the patient to a multifocal lens.

**THERE’S NOTHING WRONG WITH WHAT’S RIGHT**

Whether a patient is male or female, young or old, and wearing a daily or a specialty lens, we can help maximize their contact lens success by proactively identifying and treating patients who have tear film instability—indicating a compromised ocular surface. Osmolarity testing allows us to catch early patients at risk of dry eye, fit patients in lenses that they’re most likely to wear with success, and set appropriate expectations. It shows the need to address contact lens fitting from a proper and essential clinical perspective, and differentiates you from the “800 Contact Lens” competition. This, in turn, lessens the likelihood of contact lens dropout and makes for happier, more loyal patients. In fact, the beauty of this approach is that everyone wins. Patients succeed, contact lens practice flourishes and doctors enjoy doing what they do best—offering complete vision and wellness solutions.


**OSMOLARITY EXPLAINED**

As the volume of the aqueous component of the tear film declines, the salt concentration in tears increases. This brings the tear fluid out of homeostasis, and adds insult to the ocular surface. The TearLab test indicates whether or not the patient has a higher salt content than normal. Therefore, hyperosmolar status, resulting from either decreased tear production or an increased evaporative state, indicates reduced aqueous levels and is an important indicator of ocular surface health.*

While switching materials and solutions can’t solve every patient’s contact lens woes, making a change is not without virtue in many cases. The key to success lies in making educated decisions that can be measured versus following the well-tread trial-and-error path.

Part of the reason why 16% of contact lens wearers drop out every year\textsuperscript{1,2} is because patients and doctors hesitate to move into a more appropriate lens. More often than not, such wavering is driven primarily by fear of the increased expense with little regard to the long-term consequences of discomfort.

Similarly, it’s equally precarious to switch patients into new lenses if we’re not quite sure whether the new lenses can offer any meaningful improvement. TearLab osmolarity testing can directly address these challenges by providing an objective measure that offers peace of mind to both patient and doctor alike.

**BE DIRECT**

If you ask a patient how he’s doing with his contact lenses, he will likely say he’s doing “fine”—even if he’s taking his lenses out as soon as he gets home from work. Patients are afraid that you will either tell them they can’t wear their lenses anymore or you will try to prescribe a more expensive lens. To combat this, it’s important to ask specific targeted questions such as, “Do you feel like you need to take your lenses out when you get home from work?” Any patient who says “yes” is a dropout waiting to happen. Or ask how the comfort compares when first inserting the lenses to when removing them at the end of the day on a 1 to 10 scale. What’s more, these patients don’t merely drop out of lenses, they tend to drop out of the practice as well. Missed annual exams are a common byproduct of contact lens dropout with consequences that can far outweigh a conversation about pricier contacts.

**STAY ONE STEP AHEAD**

Dry eye affects nearly 30 million Americans—including 50% of all contact lens wearers.\textsuperscript{3-7} Therefore, even if a patient is asymptomatic, we must be diligent about addressing the ocular surface before it’s too late. Indeed, research suggests that relying on symptoms to diagnose dry eye would produce a missed or incorrect diagnosis more than 40% of the time.\textsuperscript{8-10} Without the use of measurable clinical indicators, these patients are at risk of one day dropping out of contact lenses.

For this reason, anytime a contact lens patient shows a sign or symptom of dry eyes, we test their osmolarity.  

**CASE #1**

A 36 year-old female presents wearing Acuvue 2 monthly replacement (OD -2.75, OS -3.00). The patient reports that her eyes are irritated and she needs to take out her contact lenses when she gets home from work. She also reports that her wearing time has diminished and comfort has decreased. Slit-lamp exam reveals clear corneas and Grade 1 GPC OU, with all other findings normal. Osmolarity scores are 308 OD and 311 OS. We recommended switching to a daily replacement lens, but the patient was wary of the increased cost. The patient agreed to try Dailies Total One for one week to see how her eyes would feel.

At the one-week visit, the patient commented on how much better her eyes feel, adding that she now has to remember to take the contacts out before going to bed. Slit-lamp exam showed minor GPC with no injection. Osmolarity scores were lowered to 299 OD and 300 OS. Convinced, the patient is currently wearing the new lenses.
CASE #2

A 33 year-old male reports that his contact don’t feel as comfortable as they used to. He has been wearing Frequency 55 (-5.00 OD, -4.50 OS) for the past seven years and reports that he replaces them about every month. He uses Kirkland disinfectant. Slit lamp reveals Grade 1+ Papilla OU and minor injection OU. Osmolarity was 307 OD, and 312 OS.

We recommended that the patient switch to a daily lens to improve comfort and compliance. Though the patient was wary of cost increase, we asked him to try Biotrue ONEDay.

At the one-week visit, the patient reported great improvement in comfort and much clearer vision. He says he can now wear lenses all day and not think about them. Osmolarity dropped to 300 OD/OS. The patient purchased an annual supply of the new lenses.

CASE #3

A 59 year-old female presented wearing PureVision2 multifocal (+1.00 high OD, +1.25 high OS). She reported that comfort has consistently decreased with her contacts over past five years and her vision has become more variable. She is thinking of giving up contacts for glasses, concluding that her lenses are “not worth the hassle.” Slit-lamp exam reveals G1 MGD, dry eyes, and grade 1 injection OU. Osmolarity is 319 OD and 320 OS.

We educated the patient about new innovative technology in the ULTRA for Presbyopia lens material and described how this would be better for her. We also asked her to use artificial tears, start Omega fatty acids, and use a Bruder mask for 10 minutes a day.

At the one-week visit, the patient feels much better in her contacts. She reports that her eyes feel much less dry, and her vision is not variable throughout the day. Her osmolarity also dropped to 307 OD/OS. Considering the great overall improvement, she proceeds with the ULTRA for Presbyopia lenses.

EVIDENCE DEMONSTRATES VALUE

Osmolarity testing allows you to justify your clinical decision-making in a way that patients can easily understand. When this quick test shows that osmolarity is high, it opens the door to a conversation about why trying something new is in the patient’s best interest.

TearLab osmolarity testing is one of the few tests we have to confirm dry eye, and it’s the most predictive test for dry eye. It provides scientific, objective proof and reasoning for our recommendations. It’s also the fastest test for dry eye, requiring fewer than 30 seconds from test to result.

As we discussed in part one of this series, the most effective way to combat dropout is to identify patients who are at risk before they start to complain (see A Game-Changing Approach to Help Overcome Contact Lens Dropout, May issue, page 30). Once a patient is complaining it’s often too late. We need to identify which patients are at risk of dropping out prior to first fittings and at each exam thereafter. The TearLab test makes this easy to accomplish.

And, in the event you need to ask a patient to spend more money, you can be sure that the patient can see real value in the objective evidence that you present.

Like doctors in almost every other sector of health care, today’s optometrists face significant challenges. For example, we are increasingly affected by health care reform, vertical integration, changes in patient benefit structure, third-party plan participation, increasing overhead costs, and more. All of these impact our traditional revenue streams. Yet even in the face of these hurdles, we strive to deliver improved clinical services. The evolution of point-of-care laboratory testing has been instrumental in our ability to do this.

In many ways, point-of-care testing helps us to overcome fiscal challenges while simultaneously elevating the standard of care. As such, diagnostics like TearLab osmolarity testing, are quickly gaining traction in the average optometric practice and are weaving their way into daily clinical regimens.

In part 3 of this series on how osmolarity testing can benefit your contact lens practice, we will discuss how the clinical value of TearLab testing offers a hidden revenue stream that extends far beyond direct reimbursement.

**CONSIDER THE CLINICAL VALUE**

The majority of the point-of-care testing that’s currently performed in eye care practice is related to the anterior segment. Within this segment, the largest area of potential is ocular surface disease. Dry eye affects nearly 30 million Americans, including 50% of all contact lens wearers. Furthermore, research suggests that if we were to rely on symptoms to diagnose dry eye, this would produce a missed or incorrect diagnosis more than 40% of the time.

Without question, there is an opportunity here to improve care as well as quality of life for contact lens wearers. Despite a 20-year parade of contact lens improvements, dropout rates have not fallen. About 16% of contact lens wearers drop out every year. As we discussed in the first two installments of this series, osmolarity testing can be a catalyst for meaningful change in this regard.

Osmolarity testing allows us to determine objectively and quantitatively the quality of the tear film in dry eye and the severity level of the condition, offer appropriate treatment as needed, determine the likelihood of imminent contact lens dropout, and fit patients in lenses based on clinical variables instead of monetary ones that are based on a patient’s knee-jerk decision to select the least expensive available lens. This alternative, proactive approach sets the patient up for success and, in so doing, helps strengthen your practice.

**WHERE TO START**

Like many of the tests that are performed at the point of care, to perform and bill for TearLab osmolarity testing, your office will need a CLIA waiver license. By definition, CLIA stands for Clinical Lab Improvement Amendments. This means that your office will need to be designated as a CLIA-approved laboratory, and one of the doctors must be designated and approved as a clinical lab director. To begin this simple process, you’ll need to apply through CMS to get your CLIA certification. The cost is only $150 for two years.

You may have heard the argument that point-of-care testing isn’t worthwhile because the reimbursements aren’t substantial. This is only half true. Indeed, point-of-care testing is rarely a huge profit center from the myopic perspective of direct reimbursement, although reimbursement more than

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<th>FIGURE 1</th>
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<td><strong>Number of annual patients</strong></td>
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<td><strong>Percent of patients who wear CLs</strong></td>
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<td><strong>Number of contact lens patients</strong></td>
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<td><strong>Average annual value of a contact lens patient</strong></td>
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covers the cost of the disposables. However, tests like TearLab are financially rewarding when they help you maintain and grow your contact lens practice by providing accurate clinical assessment at the point of care. Consider the benefits of knowing whether a patient has a healthy and stable tear film so you can choose the most suitable lenses and treatment to help that patient maintain healthy, comfortable wear. Osmolarity testing also helps you manage dry eye more efficiently because, even though symptoms are usually the last thing to improve, improvement in osmolarity scores offers piece of mind that the patient is on the right path.

It’s also important to clarify that, in terms of growing the contact lens segment of your practice, success with the TearLab test is not dependent upon whether you perform testing on the same day as the primary visit or if you bring the patient back for a dry eye evaluation. In either case, the advantage stems from the value of the data itself and what that data enables you to achieve clinically in terms of outcomes in your contact lens patient population.

THE HIDDEN PROFIT CENTER

The direct reimbursement for TearLab osmolarity testing is a modest $22.50 per test/per eye—or $45 per patient since two eyes must be tested—according to the 2016 CLIA Medicare Fee Schedule.14 Commercial payers pay slightly less. But consider what this test allows you to achieve clinically in terms of patient care. If this test leads you to properly diagnose ocular surface disease and prevent contact lens dropout, the economic return potential is significant. In addition, there is revenue upside in dry eye treatments such as omega-3 supplements, MGD treatments, punctual plugs, etc.

Consider that the mean annual value of a single contact lens patient is about $275. Assuming your practice has a 16% dropout rate—which is low compared to data in many studies—you could be missing out on millions of dollars in revenue over the course of about 45 years (see Figure 1).15 And most importantly, you would allow patients who want to wear contact lenses to remain in them.

Figure 1 shows a lifetime impact of contact lens dropout of more than $2 million. For the sake of argument, let’s look at these figures even more conservatively. Since the prevalence of abnormal osmolarity is 62%, at least 50% of dropout should be due to dry eye disease. This would still provide an impressive lifetime value of $1 million. And this does not account for any additional revenue that you would generate treating this dry eye population.

Osmolarity testing allows you to get ahead of dry eye in your contact lens wearers and enables you to justify your clinical decision-making in a way that patients can easily understand. This may mean the patient needs treatment or it may mean the patient would benefit from a higher-end contact lens. In either case, you are staying in front of the problem instead of falling victim to its consequence.

Also, consider that losing a contact lens patient not only costs you the material revenue stream, in many cases you also incur the “replacement cost” of bringing in a new patient to replace the one who has sought out a solution from another provider.

When clinical tools like the TearLab test help you keep patients comfortable and happy in their lenses, they are of tremendous value—in every respect.

CHANCE FOR THE BETTER

They say that necessity is the mother of invention. That certainly rings true regarding the role of TearLab testing in contact lens practice. Instead of allowing changes in health care to take the wind out of our sails, we ought to anticipate change, embrace it, and direct it to help deliver better clinical outcomes and stronger bottom lines.

HOW TO CODE FOR THE TEARLAB OSMOLARITY TEST

CPT coding for TearLab is straightforward:

CPT 83861: Microfluidic analysis utilizing an integrated collection and analysis device, tear osmolarity.

If I were testing both eyes and coding for it, this is what the claim form would look like:

- 83861-QW-RT (paired with appropriate ICD-10, coded for laterality)
- 83861-QW-LT (paired with appropriate ICD-10, coded for laterality)

Clinical lab tests can be performed and billed for on the same day as any office visit, including a vision visit, whether a 992XX or 920XX code, so you don’t have to reschedule the patient to perform the tests or to get reimbursed for the tests.

WHY TEARLAB?

TearLab osmolarity testing is one of the few tests we have to confirm dry eye. It’s also the most predictive test for dry eye. It provides scientific, objective proof and reasoning for our contact lens recommendations. It can be performed on patients while they are wearing their lenses, and it requires fewer than 30 seconds from test to result.

14. https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/ClinicalLabFeeSched/clinlab.html