Guest Editorial

Does Convergence Insufficiency Really Matter?

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Imagine for a moment, that you have a crystal ball that allows you to see into the future. As you peer into your crystal ball you begin to see events unfolding in the eye care arena that will affect nearly 2.25 million people in the United States alone. Let's imagine that it is only two years away.

It's 2012 and ophthalmic blogs and news feeds are buzzing. The National Eye Institute (NEI) has just released the long awaited results of a monumental medical research project announcing the cure for one of mankind's most dreaded eye diseases. Multi-center research teams, comprised of optometry and ophthalmology from Mayo Clinic to Bascom Palmer, including six colleges of optometry were funded by the National Institute of Health (NIH). This gold standard, double blind, prospective, research was preceded by nearly 10 years of intermediary research that laid the foundation for what was to be the seminal paper.

The research is in and it is decisive. In the year 2012, we have a treatment that will cure this eye disease through a programmed series of office visits involving a systematic therapeutic process with the doctor and his or her office team. Once successfully treated, the patient will no longer require any form of maintenance therapy. The results are conclusive. The disease is no longer a threat and the patient will lead a much more productive and happy life.

Yes, you've witnessed this in your crystal ball. An efficacious and lasting treatment has been found for the eye disease that while rare in children, affects 2.25 million in the US who are 40 years and older. But, now there is a cure. That's right, a cure has been found for primary open angle glaucoma (POAG)!

You stare deeper into the crystal ball. Could this be only a dream? But all you can see is the announcement of the research. You begin to wonder, what if this was true, a cure for POAG was found? What will be the response of the eye care community? Consider that the emphasis is on board certification as a means to insure the highest level of patient care. Then, is it not safe to presume that if a cure where found for POAG, the management of a glaucoma patient would change from the "old way" of treating POAG? Would not the usual treatment involving a maintenance ophthalmic drug therapy regimen with periodic doctor visits to monitor the patient not only change, but change rapidly? After all, what doctor would prescribe a method of treatment that required the patient to comply with a regimen of daily doses of drug therapy and periodic maintenance visits if an alternative was available? The research has now proved the previous therapy to be only palliative at best and ineffective as a cure. Without a doubt, for months and years after this announcement, the ophthalmic journals will be packed with articles addressing how to implement this new system to cure POAG.

The optometric lectures at all of the national meetings would no doubt have featured speakers providing the latest insights on how to effectively follow the new and proven office-based delivery of care for POAG. Our national associations will dedicate multiple pages of their websites to this new and proven management.

There would be an anticipated swarm of media coverage. Cable news, newspapers, magazines, blogs, radio, television and every other outlet known to man would be announcing that the cure for POAG has been found!

What's more, medical malpractice is looming. What doctor would risk treating their POAG patient with an outdated approach when there was now a cure in a matter of a few weeks of treatment? With all of this professional and public awareness the change to the new office-based delivery of care for POAG would, no doubt, come about faster than a blink of the eye.

Reality check 1- What matters is we have the research.

Your crystal ball begins to glow, sparkle and fade. The images of the future seemed only a dream. The view is beginning to change. The events look very similar today. Yes, the situation is nearly the same. The NIH and NEI have funded $6.1 million dollars for a multicenter, prospective, masked research project involving both optometry and ophthalmology. The 10 years of intermediate research led to the culmination of major breakthrough. This time a cure has been found for an "eye problem" that affects many more Americans with a prevalence of 7% of the US population. Unlike POAG that is rare in children, this condition affects nearly 4 million children in the US alone.

The NEI proclaimed the results on October 13, 2008. The traditional assumptions of an ongoing maintenance treatment for this condition was proven to be ineffective. The research is definitive. This "eye condition" can be systematically eradicated with a programmed treatment provided by a doctor.

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The "eye condition" is in fact Convergence Insufficiency (CI). While CI does not lead to blindness, this binocular vision dysfunction affects nearly 21.5 million people in the US and has the potential to significantly reduce a patient's quality of life.[1] Symptoms include headaches, diplopia, asthenopia, loss of concentration and reduced performance for sustained near-centered tasks such as reading. Now proven through the culmination of 10 years from the Convergence Insufficiency Treatment Trial (CITT), the cure for CI has been found.

As a matter of record, the CITT research was conceived in the summer of 1998 by a planning committee made up of Mitchell Scheiman, OD, Susan Cotter, OD, Richard London, OD, MA, Michael Rouse, OD, MEd, Eric Borsting, OD, MS, MEd; Jeffrey Cooper, MS, OD, Paul De Land, PhD, and G. Lynn Mitchell, MAS. This group laid the ground work for the multicenter research that included Mayo Clinic, Bascom Palmer Eye Institute, Ratner Eye Center and six colleges of optometry throughout the United States. The preliminary studies fostered the $6.1M NEI grant that lead to the final 4 year CITT Study from 2004-2007. The results of the CITT Study were published in *Archives of Ophthalmology*.[1] In September 2009, *Optometry and Vision Science* published the long-term follow-up research showing that the results of those patients who were successfully treated in the CITT study had maintained their results over time.[2] This paper demonstrated that office-based vision therapy (VT) is efficacious, a cure for CI.

Reality check 2- What really matters is…we have it published.

Since the proclamation from the NEI regarding the results of the 10 years of multicenter research, what has changed in the eye care community regarding the diagnosis and management CI?

- We have seen the results of the CITT research announced in at least one edition of every optometric journal since October 2008.
- The NEI has published an online video that describes the CI and the best treatment is through office-based VT.
- The American Optometric Association (AOA) has produced a diagnostic screening kit called the Red-Green Penlight Near Point of Convergence Test and made this available to AOA members as a "no-charge" member benefit.[3]
- The AOA has dedicated a web page to the description of the office-based vision therapy treatment protocol.[4]
- The College of Optometrists in Vision Development (COVD) has published numerous articles in *Optometric Vision Development* (OVD) and on the COVD website.[5]
- The Optometric Extension Program Foundation (OEPF) has published numerous articles in the *Journal of Behavioral Optometry* (JBO) and on the OEPF website.[6]
- Too numerous to mention websites and blog articles describing the results of the CITT Study

Something is still out of sync with this picture. Consider, now we have "gold standard" research that clearly shows the two most commonly prescribed treatments for CI, base-in prisms and/or pencil push-up therapy are in fact *ineffective* in the treatment of CI. They are no better than a placebo. However, office-based VT in conjunction with home oriented activities is proven to be highly effective.

Regardless of the science, my perception is that, except for those who are the behavioral, developmental, rehabilitative ODs, a large percentage of the optometric and ophthalmological communities are still unaware of the relevance of diagnosing and treating CI.

Reality Check 3 - Does CI really matter?

In the fall of 1979 I was just beginning of my career in optometry when it hit me. It was one of those "life changing" moments that you never forget because your sense of reality is replaced with a new reality and sets you on a path toward a more defined purpose of what really matters. Like a slice of time that stands still, it resonates in my memory…but this occurred over 30 years ago.

My story begins as a budding graduate from Michigan's College of Optometry at Ferris State University (MCO). Thanks to the inspiration provided by my professors at MCO, Drs. Richman, Garzia, Cron and others, I emerged from optometry school with an idea. I would start my fledging optometric practice and offer VT, a service that was previously unavailable in my community. Naturally I wanted to try my new skills with those patients whom I thought I would have a high probability of success. So, with my small collection of VT equipment, I began to prescribe and personally deliver office-based vision therapy for children who presented with "general visual skill issues" like CI.

My goal was to help these kids acquire a normal nearpoint of convergence (NPC) and improved positive fusional vergence which in turn would help them no longer have headaches, eye strain and double vision. After all, my premise – my reality was that these non-strabismic binocular problems (and related oculomotor and/or accommodative issues) like CI were akin to any other ocular malady. There were clinical findings and related symptoms. You treat the disorder, the patient attains the desired clinical benchmarks and patient completes the therapeutic process with a successful outcome with abatement of symptoms. That is what really mattered!

However, on that October afternoon in 1979 my reality of what really mattered was about to change. You see, I had been treating a 9-year-old boy (let's call him Johnny) in 3rd grade for a condition of what I thought to be a "run of the mill" CI and related oculomotor problems. He presented with a receded NPC, high exo at near and other typical clinical findings. His nearpoint symptoms were eye fatigue and headaches with extended reading. After his examination I advised his mother that Johnny needed VT. What was also remarkable is that she agreed to my proposed treatment plan! I provided office-based VT along with some home activities.

After completing ten visits or so, about half way into his VT treatment plan, I did a progress evaluation. Johnny was making progress. His NPC was improving and his oculomotor tests were coming along nicely, measuring a significant gain in speed and accuracy. I was pleased. The patient was meeting the appropriate optometric benchmarks. He was getting better and that was good. As a new optometrist, I felt I was doing my job and really didn't give it too much additional thought.

What I thought was "well and good" wasn't bad…it just wasn't what really mattered. I found what really mattered that autumn afternoon. As I walked across the parking lot to enter my office, a man jumped out of his car and began to approach me. My first instinct was apprehension as I had never met the man before, but he had

a smile on his face and introduced himself to me as Johnny's father. My initial concerns immediately melted away as he reached out to shake my hand and began to tell me about his son. You see Johnny wasn't just having fewer headaches and no longer seeing double; he was beginning to enjoy reading. His father's words were, "Thanks to you my son is now doing much better in reading and I wanted to let you know how much I appreciate what you have been doing to help him!"

At that moment my reality of what I was doing with my patients through VT changed. What really mattered was the impact of that vision problem on the child's life.

Reality check 4- What really matters is the impact we make on lives!

Is it important that we now have "gold standard" research that proves that office-based vision therapy is the only effective treatment for CI? The answer is a resounding yes! The monumental work by Dr. Mitch Scheiman and the rest of the CITT team made a historic contribution to optometry and the patients we serve through their research. Their work is not over as the CITT team continues into the next phase of research. It is designed to study the relationship between the treatment of CI and its impact on reading ability.

Consider this, whether you are just getting started in your optometric career or you have been practicing for over 30 years; when you provide office based VT for your patients you will start to understand what matters. For the patient with CI it is not about getting a better "score" on their NPC. But rather, when they can read effortlessly for longer periods of time…or when a child says, "I'm getting my homework done"…or when a parent announces that their child likes to read…that's what really matters.

What really matters is that there are millions of children with unaddressed binocular vision problems, including CI, that truly need office-based optometric VT. We have the research. We have the ear of the profession. It is up to all of us who understand the connection between vision problems and the untapped potential of children/adults with these problems. We must not be silent and wait for more research or more journal articles. We have the tools but we must step forward and help our optometric colleagues see and understand what really matters.

Here is where the crystal ball analogy ends and the real hope for the future exists. It requires all of us, the behavioral, developmental, rehabilitative optometric community to get involved. Take action and be a source of influence. There are many new ways that you can help to be a source of influence for our profession.

One of the easiest first steps is to be involved with your local optometric society. Share stories of your success with your colleagues. You could also begin by sharing your patient stories of success with them via e-mail. You may take another step and use the latest communication venues to reach out to someone. The newest level of communication is with social networking, such as Facebook (www.facebook.com) or Sovoto (www.sovoto.com). With these communication platforms you will be able to share information and enjoy the feedback from others in a forum that is fun and educational. These provide you with as much autonomy as you want to capture the hearts and minds of the profession. If you are interested in learning more, please contact me at wow@wowvision.net and I'll help you plug into the social networking possibilities.

With your involvement, whether it is through a personal touch or through this new level of internet communication you can play a vital role in changes within the eye care community. Collectively, we are all helping our optometric brethren to see what really matters. VT makes a difference in someone's life! When CI is viewed as seriously as POAG by the entire ophthalmic community, that's when we will have the chance to help the 21.5 million children and adults with CI…that's when CI will really matter!

References

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