News and Research from the Envision Low Vision Rehabilitation Center

"Excellence through Collaboration" Programming Set for Envision 09

"This 'boutique' conference is unique in bringing together world class presenters and informed attendees in a way that facilitates interdisciplinary networking, communication and research. It is a great conference to attend, learn and enjoy." - Gregory Goodrich, PhD

continued on page 4



The Envision Hispanic Initiative: Encarguese de su Visión

he Hispanic population is the largest minority group in the United States.¹ By 2050, an estimated 102 million Hispanics will reside in the United States, nearly 24.5 percent of the total U.S. population.²⁻³ The 2000 Census from the U.S. Census Bureau showed

an estimated 10 percent Hispanic population in Wichita, the largest city in Kansas. This number is expected to double, and possibly triple, by the year 2010. In addition, there are three counties in Western Kansas where Hispanics make up more than 50 percent of the total population.⁴

Hispanics are three times more likely to have diabetes as non-Hispanic whites, and according to the American Diabetes

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Vol. 3 Issue 3, 2009

Many individuals from the Wichita Hispanic community attended the Here's to your Health fair at Envision on January 31. The Hispanic population is at an increased risk for many health problems, including diabetes and diabetic retinopathy.

Association, the prevalence of diabetic retinopathy among Mexican Americans who have diabetes is between 32 and 40 percent. In addition, recent studies have shown that glaucoma is the leading cause of blind-

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The Envision Hispanic Initiative continued from page 1

ness among Hispanics.^{2-3, 5-7}

For Hispanics in the United States, health disparities often result in decreased quality of life, loss of economic opportunities, and perceptions of injustice. For society, these disparities translate into less than optimal productivity, higher health care costs and social inequity.

services and public education are accessible to Hispanics. With the help of a grant from the National Eye Institute, the Envision Low Vision Rehabilitation Center is the first health care services organization in the region to focus specifically on eye diseases, such as diabetic retinopathy and glaucoma, and their effect on the



Members of Proyecto Enfoque, the Hispanic support group at Envision, practice dancing the cumbia.

According to the Pew Hispanic Center and the Robert Wood Johnson Foundation, one in four Hispanics do not have a personal physician, nor do they regularly visit the doctor, in part, due to a lack of access to health insurance. Recent immigrants can also be at increased risk for chronic disease, particularly those who lack fluency in English and familiarity with the U.S. health care system, or those who have different cultural attitudes about the use of traditional versus conventional medicine.⁸

In order to address these health disparities, in 2007, Envision hired its first manager of outreach and Hispanic relations to ensure that

underserved Hispanic population. In order to promote healthy vision, Envision provides outreach to the community where Hispanic seniors find themselves everyday, and delivers the "Encarguese de Su Visión" or "Take Charge of your Vision" program in their own language.

hire bilingual clinic staff, as well as establish a "Spanish caller option" for Spanish-speaking patients. Another key component involves a series of public education materials in Spanish, with the understanding that these pieces must be culturally relevant in order to be effective. When it comes to marketing materials, a direct translation from an English counterpart does not effectively reach this population, as cultural differences and traditions must be considered. For example, independence can be perceived as solitude to a culture that thrives on being surrounded by family and extended family. It is not shameful to depend upon family members to help one fulfill their basic needs, so the benefit of "maintaining independence" is not as strongly emphasized as it is in other cultures. A focus on the quality of life and the ability to continue to provide for one's family is a more valuable message.

Envision brochure topics include disease-specific information, a guide to low vision rehabilitation, employment for the visually impaired, as well as a Hispanic Support group piece, "Proyecto Enfoque", which invites Hispanics to

"The main objective of the Hispanic focus group is to share resources in a culturally relevant environment, and to discuss cultural norms which directly contribute to the vulnerability of this population relative to vision loss."

As communication barriers are often the first road block for older Hispanics, it was an imperative first step for the Envision Low Vision Rehabilitation Center to

attend the monthly focus group. The main objective of the Hispanic focus group is to share resources in a culturally relevant environment, and to discuss cultural norms which directly contribute to the vulnerability of this population relative to vision loss. One such cultural norm is diet. Discussions include healthy alternatives to recipes that are traditionally high in cholesterol. Another cultural norm is religious tradition. In a population that is 68 percent Catholic, it is common for diseases to be seen as punishment from God, and a reality that needs to be accepted. Emphasis is also placed on the importance of early detection and regular eye exams, especially for diabetics and those at risk. Meetings are conducted entirely in Spanish, and strive to incorporate relevant cultural exercises whenever possible, to keep the group engaged.

Response to the Hispanic Initiative has been notable. In 2007, Envision identified an existing 1.9 percent Hispanic patient base at the Envision Low Vision Rehabilitation Center, and saw an increase of 5.3 percent in 2008 as outreach efforts progressed. The outcomes of the Envision Hispanic Initiative will demonstrate an increase in public awareness of healthy vision, hope for individuals with eye diseases that cause blindness, and a conscious effort by members of our Hispanic community to prevent vision loss through public education and early detection.

But Envision does not do it alone. Collaboration has played a vital role in establishing name recognition and trust within the Hispanic community. The office of Hispanic Relations is a member of the Wichita Hispanic Chamber of Commerce, and chairs the health committee in order to foster relationships with other local organizations that are reaching out to this growing population. Envision has also worked closely with the La Familia Senior Center, which is the only senior center in Sedgwick County that plans its services and activities around the needs of Spanish-speaking persons. This center currently serves an estimated 5,000 Hispanics per month, 66 percent of whom are diabetic.

At the national level, Hispanic outreach efforts and Spanish publications by organizations such as the National Eye Institute, American Diabetes Association and American Foundation for the Blind are utilized by Envision during outreach to emphasize the importance of healthy lifestyles. There is a consistent tone to each successful Hispanic outreach that considers the family unit, religious tradition, cultural norms, health disparities, immigration issues and sub-cultures within the group.⁹⁻¹¹

Envision is prepared to make comprehensive low vision rehabilitation services financially accessible to Hispanics of all socioeconomic backgrounds. In addition to participation in the Medicare Low Vision Demonstration Project, which extends Medicare reimbursement for vision rehabilitation services to Medicare Part B participants, Envision has a medical assistance program that ensures that no patient is denied service due to lack of insurance coverage or ability to pay. For more information about the Envision Hispanic Initiative, or to request brochures in Spanish, contact Lori Morton at (316) 440-1511 or lori.morton@envisionus.com.

Lori Morton is the Manager of **Outreach & Hispanic Relations for** Envision Low Vision Rehabilitation Center. She is instrumental in collaborating with members of the Hispanic community and local health care providers to focus specifically on eye diseases, such as diabetic retinopathy and glaucoma, and their effect on the underserved Hispanic population. Lori oversees Envision's "Encarguese de Su Visión" or "Take Charge of your Vision."

References

I U.S. Census Bureau. U.S. Hispanic Population Surpasses 45 Million Now 15 Percent of Total. U.S. Census Bureau News, U.S. Dept. of Commerce, Washington, D.C., 2008. Available at http://www. census.gov/Press-Release/www/releases/ archives/population/011910.html.

2 Centers for Disease Control and Prevention. Health Disparities Experienced by Hispanics — United States. Morbidity and Mortality Weekly Report 2004; 53(40);935-937.

3 Creciendo Juntos (Growing Together). Latino Health Survey October 2007 - February 2008.

4 Kansas Legislative Research Department. Change in Hispanic Population of Kansas Counties from 1990 to 2000. Kansas Legislative Research Department, January 15, 2003 Minutes. http://www.kslegislature.org/klrd.

5 Ethnic and gender differences in psychosocial factors, glycemic control, and quality of life among adult type 2 diabetic patients, by Ranjita Misra and Julie Lager. Journal of Diabetes and Its Complications 23:54-64, 2009.

6 American Diabetes Association Saaddine JB, et al. Prevalence of diabetic retainopathy in the United States: National Health and Nutrition Examination Survey 2005-2006, ADA 2009; Abstract OR 382,

7 Prevent Blindness America, National Eye Institute. Vision Problems in the U.S.: Prevalence of Adult Vision Impairment and Age-Related Eye Disease in America. Schaumburg, IL: Prevent Blindness America: 2002.

8 Livingston G, Minushkin S, Cohn D. Hispanics and Health Care in the United States: Access, Information and Knowledge. A Joint Pew Hispanic Center and Robert Wood Johnson Foundation Research Report; 2008

9 National Institutes of Health, National Eye Institute. Información de salud en español. Información en español. http://www.nei.nih.gov/health/ espanol/.

10 American Diabetes Association. Latinos and Diabetes. http://www.diabetes.org/communityprograms-and-localevents/latinos.jsp.

II American Foundation for the Blind. New Spanish Content on AFB's Web Sites. AFB eNews; June 2009. http://www.afb.org/Section. asp?SectionID=42&TopicID=242.

RESEARCH Highlights

lames B. Nolan, PhD Director of Research, Envision



James B. Nolan, PhD

"The Envision-Atwell Award is given to an ARVO presenter who is a junior investigator, defined as an individual who is currently a student, post-doctoral researcher, or junior faculty member with less than five years since their last professional degree."



Envision-Atwell Award

The First Annual Envision-Atwell Award in Low Vision and Vision Rehabilitation **Research Presented at ARVO 2009**

he first annual Envision-Atwell Award for research in low vision and vision rehabilitation was presented to Ms. Nicole Ross, a student at the New England College of Optometry, at the annual meeting of the Association for Research in Vision and Ophthalmology (ARVO) held in Ft. Lauderdale, Florida on May 6, 2009.

According to the ARVO website (www.arvo.org), ARVO is the largest vision research organization in the world, with members including more than 12,000 researchers from 73 countries. ARVO encourages and assists research, training,

publication and knowledge-sharing in the fields of vision and ophthalmology.

The award was originally named the Atwell Award, in honor of long-time low vision research supporter Constance Atwell. While on staff at the National Eye Institute, Dr. Atwell played a pivotal role in encouraging and motivating high quality low vision research. The award has now been renamed the Envision-Atwell Award through an agreement made between Envision, ARVO and the Low Vision Research Group prior to this year's meeting. The Envision-Atwell Award is



Linda K. Merrill, Envision, Inc. CEO, Eli Peli, OD from the Schepens Eye Research Institute at Harvard University, the first annual Envision-Atwell award winner **Nicole Ross** from the New England College of Optometry and Schepens Eye Research Institute at Harvard University, James Nolan, PhD, Director of Research at Envision, Mike Oberdorfer, PhD from the National Eye Institute, and Alex Bowers, PhD from the Schepens Eye Research Institute at Harvard University pose for the camera following Nicole's award presentation.

given to an ARVO presenter who is a junior investigator, defined as an individual who is currently a student, post-doctoral researcher, or junior faculty member with less than five years since their last professional degree. The award consists of a \$500 stipend and a trophy celebrating the spirit of the award. The organizational committee of the LVRG reviews the research scientists' presentations who have declared that they wish to be considered for the award. The award is presented at the annual LVRG social held during the ARVO meeting. This year's social was sponsored by

Envision and Good-Lite (manufac-

ments and charts) and was attend-

ed by scientists and professionals

from throughout the world who

all have the common interest of

research.

low vision and vision rehabilitation

With the tension building in the

potential award recipients, Rich-

ard Jamara, OD and president of

the LVRG introduced other LVRG

committee members as well as

Shirin Hassan, PhD and incom-

ing president of the LVRG. James

Nolan, PhD, Director of Research

at Envision and LVRG committee

member provided the group with

some historical information behind

the award as well as recognized

turer of vision screening instru-

Group that meets annually at ARVO to a junior of the Low Vision Research Group.

> ed the award. The award recipient,

Ms. Ross, is also a member of Dr. Eli Peli's research lab and Schepens Eye Research Institute. Harvard University

August Colenbrander, MD and John Brabyn, PhD from the Smith-Kettlewell Eye Research Institute enjoying themselves at the Low Vision Research Group social, sponsored by Envision and Good-Lite, at ARVO 2009.



James Nolan, PhD, Director of Research from Envision. presenting a check from Envision to **Joanne Angle**, Executive Director of ARVO, which will fund the endowment to provide an award through the Low Vision Research investigator in low vision and vision rehabilitation science. The award will be known as the Envision-Atwell Award for Research in Low Vision and Vision Rehabilitation Science. The two are joined by **Richard Jamara**, **OD** from the New England College of Optometry and current president

the upcoming Envision Conference being held September 9-12 in San Antonio, Texas. Dr. Nolan then introduced Linda K. Merrill, Envision, Inc. CEO, who present-

in Boston, Massachusetts. She received the award for her project entitled "Consideration of Optical Scotomas in **Designing Visual Field** Expansion Devices."

"Envision is strongly dedicated to recognizing and honoring the great strides being made in the low vision rehabilitation field." said Linda K. Merrill, Envision. Inc. CEO. "Research is a critical component in determining best practices for the achievement of independence by people who are blind or low vision."

Envision is pleased to announce that a similar award will be presented to a mid-career senior investigator in low vision and vision rehabilitation research at future Envision Conferences. beginning this year. The award

criteria will be based on a research presentation given by a scientist having six or more years post-terminal or professional degree research experience and will be judged based on scientific merit by LVRG members who are present. The award will also consist of a \$500 stipend and trophy celebrating the spirit of the Envision Conference.

UES C

Dasa V. Gangadhar, MD



Dasa V. Gangadhar, MD Cataract and Implant Surgery Corneal Transplantation

Grene Vision Group Kansas Eye Bank & Cornea **Research** Center

"Even in individuals with low vision. cataract surgery may still be appropriate. At minimum, cataract surgery can improve peripheral vision, brightness and colors."

Cataracts: An Overview for the Low Vision Professional

Low vision rehabilitation is, by nature, a collaboration of medical professionals and a variety of other low vision specialists. Not all involved with the continuum of care know the exact science of cataract formation or removal. For this reason, the basics are necessary in order to fully understand the etiology and treatment options for patients who may have vision loss due to cataracts.

Normal Eye Anatomy:

Vision is a complicated process with light rays passing through various structures of the eye (cornea, pupil, and lens) before becoming focused on the retina, which serves much like film in a camera. The lens is one of the primary focusing structures

of the eye, and sits just behind the colored part of the eye.

What is a Cataract?

A common myth is that a cataract is a growth or film that forms on the eye's surface. However, a cataract is the clouding of the normally clear lens inside the eye. The normal lens is formed of neatly arranged protein fibers that allow light to pass easily and become focused clearly. In a cataract, these fibers clump together to form opaque clusters



and the entire lens becomes cloudy and disrupts the passage of light into the eye. This can make images seem dull or blurry and interfere with a patient's ability to see clearly.

What Causes Cataracts?

For the vast majority of individuals, cataract development is part of the normal aging process. Heredity, however, can play a role in how early or late in life a patient develops a cataract.

Risk Factors: Certain risk factors, alone or in combination with age, can increase the risk of developing cataracts as an adult.

- Smoking
- Excessive exposure to UV rays (sunlight exposure)
- Significant eye injuries
- Poorly controlled diabetes
- Long-term use of certain medications, primarily corticosteroids

Signs and Symptoms of Cataracts:

The word cataract is derived from the Greek word for "waterfall." If a cataract becomes advanced enough, a patient's vision can fail and they may feel like they are seeing everything through a sheet of rushing water. Today, it is rare for a patient's cataract to advance that far because treatment is usually sought at a much earlier stage.

Classic symptoms include:

- Blurred vision: Fuzzy vision is a common first symptom of cataracts. Street signs are more difficult to see and reading becomes a challenge. Many patients even present the complaint that they can no longer see the golf ball.
- Night vision difficulties: Patients with cataracts may feel unsafe driving at night. Glare from oncoming headlights can become blinding and streetlights can take on a halo effect.
- Excessive brightness and glare: Even sunlight can be

blinding and create intolerable glare for patients.

• **Prescription changes:**

Frequent eyeglass prescription changes are needed. With early cataract formation, it is appropriate to change a patient's prescription in order to improve vision. However, with more advanced cataracts. eyeglass changes are no longer beneficial.

• Dimness of colors:

Cataracts cause colors to become washed out and dull. Because cataracts usually develop slowly, patients are often unaware of this color change. It is only after cataract surgery that many patients realize the profound impact that the cataract had on color perception and brightness.

Cataract Treatment:

There are no medical treatments for cataracts. No eyedrops, exercises, medications, or glasses will cause cataracts to regress or disappear. Surgery is the only definitive treatment for cataracts. The surgical technique has progressed so much that the incision can be as small as two

• Increased eyestrain:

For many cataract patients, reading, working on a computer, or using their eyes for daily activities can create strain or fatigue.

• **Double vision:** Patients may see "ghost" images or an outof-focus shadow effect.

millimeters and a patient's return to excellent vision can often occur within a few days. Cataract surgery has become the most commonly performed surgery and one of the most successful. Surgery can have a life-changing impact for many patients.

Not everyone that has a cataract needs surgery. "If it is not broken, don't fix it." If a patient is not yet struggling or limited in their daily activities, treatment may not be necessary. Patients may be able to compensate by changing glasses, using magnifying lenses or with improved lighting when reading or working.

Patients can be trained on these simple modifications through low vision rehabilitation. Through training in activities of daily living, assistive technology, adaptive aids and appropriate lighting, patients can continue to utilize their remaining functional vision.

When a patient's cataract progresses to a point where it is significantly interfering with daily living or compromising their lifestyle (driving, cooking, reading, performing their job, sewing, or golfing) it may be time to recommend surgery.

Several decades ago, doctors waited until a cataract became "ripe"- when the lens became fully opaque - before surgery was performed. With modern surgical techniques and excellent surgical results, it is better to proceed earlier than was customary in the past. continued on next page

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Surgical Technique:

Modern cataract surgery is performed on an outpatient basis, either in an ambulatory surgical center or in a hospital. Surgery is performed with anesthetic eye drops or local anesthesia. Patients do not need to undergo general anesthesia. Surgery is typically painless, both during and after surgery. Using an operating microscope, tiny surgical instruments are used to break apart and remove the cloudy cataractous lens from the eye. Ultrasonic techniques (called phacoemulsification) are the most modern techniques of cataract removal. Lasers are not used in cataract removal. The back membrane of the lens

(called the posterior capsule) is usually left in place. A man-made

> Intraocular lens implant

In cataract surgery, the intraocular lens replaces the eye's natural lens.

During cataract surgery, tiny instruments are used to break apart and remove the cloudy lens from the eye.

Images courtesy of American Academy of Ophthalmology

artificial lens is then implanted into the eye to replace the natural lens that was removed.

Visual recovery is usually very rapid and patients can resume normal daily activities almost immediately.

The lens capsule (the membrane that holds the artificial lens in place) can become cloudy several months or years after the original cataract operation. If the cloudy capsule blurs a patient's vision, a laser procedure (posterior capsulotomy) can be painlessly performed to make an opening in the capsule, restoring normal vision.

Lens Implants:

Modern lens implants are usually made of a foldable material (acrylic or silicone) that can be implanted into the eye via very small incisions. The power of the lens must be individually calculated for each surgery. Lens implants today can correct near-sightedness and farsightedness. The most modern specialized lenses can even correct astigmatism and can have multifocal powers for best uncorrected distance and near vision. Surgery can make one much less dependent on glasses, but often reading glasses or glasses with a low pre-scription are still needed for patients to obtain their best vision.



An intraocular lens (IOL) implant

Low Vision and Cataracts:

There are many causes of compromised vision beyond cataracts. Macular degeneration, inherited ocular disorders, glaucoma, and other eye diseases can create uncorrectable visual compromise. Individuals with these diseases can, and will, still develop cataracts. Even in individuals with low vision, cataract surgery may still be appropriate. At minimum, cataract surgery can improve peripheral vision, brightness and colors.

Summary:

Today's surgical innovations have effectively eliminated the fear of vision loss from cataracts. Modern cataract surgery is performed on millions of patients annually and is successful in over 95 percent of cases. Even patients with low vision from other causes may still benefit, to a limited extent, from cataract surgery. Regular eye exams are necessary to diagnose and treat eye diseases before they become more serious. Modern medicine continues to expand the boundaries of eye care and eye surgery.

So What if We Go Outside the Box? **An Argument for Cataract Extraction** of Moderate to Profound Visually **Impaired Persons:**

hroughout my career, a quagmire in my low vision rehabilitation practice has always been convincing cataract surgeons to perform a cataract extraction on my moderate to profound visually impaired patients. This is true whether it was an academic institution or a 1,200 bed hospital with an eye institute. Location also didn't matter whether it was Detroit, Baltimore or Morgantown. That is, until I met and convinced a junior faculty member in Baltimore to consider the premise. Those results are now being considered for publication in a major peer review journal.

The usual reasons for not considering the surgery were systemic review of systems, age, and the thought that it "wouldn't help." This was especially true of patients with macular degeneration for the reasons of age as well as the disease.

Well, the baby boomers are here with their Macs, PCs, iPods, and iPhones - texting, emailing, gaming, Facebooking and Twittering – and they aren't ready to go to that nursing home! There are millions of Americans affected by cataracts each year. As a result of the baby boomers aging, there will be a significantly greater incidence and epidemiological change as well as increased quality of life issues.¹⁻¹⁰ This includes driving and tennis, avocations and travel, shopping, reading, using the computer, sports and simply living.

In the last six months, I have seen four patients that needed cataract surgery who were told in the past, for various reasons, that cataract surgery should not be performed. I discussed my philosophy of having cataract extraction as part of the low vision rehabilitation process when appropriate, realizing that case and social history can often lead to prejudgment about an individual, perhaps preventing implementation of a surgical procedure that may unequivocally change their psychological and social health and current life predicament.

Clinical diagnoses, past consultations and possible reasons given by each of the four patients (prior to seeing me) included a history of the following:

- factors"
- implications
- in the right eye

I. History of amblyopia strabismus, diplopia and significant psychosocial manifestations 2. High myopia, myopic degeneration, status post laser for lattice and "risk

3. Chronic history of cluster headaches, neurological history, chronic complaint of visual phenomenon, psychosocial and domestic 4. Risks after retina detachment

and status post laser surgery

continued on next page

GUEST COLU

William L. Park, OD, FAAO



William L. Park, OD, FAAO

Private practice, LLC

Past Director of Low Vision Services, Lions Research & Rehabilitation Center. Wilmer Eye Institute-Johns Hopkins University

"There are millions of Americans affected by cataracts each year. As a result of the baby boomers aging, there will be a significantly greater incidence and epidemiological change as well as increased quality of life issues."

Subsequently, I referred all four patients for cataract extraction, as the "first step in low vision rehabilitation." All of these cases were very successful following surgery, with significant visual acuity improvement and, hopefully, quality of life enhancement. Here is a snap shot.

Case Study

A 63-year-old single female was seen in late December of 2008 with a self-reported history of macular degeneration, high myopia, lattice degeneration and retinal holes (with status post laser treatment in PA).

There was a history of her receiving her first prescription at 8 years of age. She had recently moved to Kansas from Arizona to live with her daughter due to the impact of her visual impairment on her life. Review of systems was negative for systemic disease.

Chief complaints consisted of decreased color perception and discontinuance of driving due to vision, poor subjective mobility and safe travel, difficulty with all visual tasks such as reading, television viewing, seeing faces, financial management, personal management and grooming, to name a few.

The Geriatric Depression Rating Scale (GDS) indicated a score of 2 and the Mini-Mental State Examination (MMSE) indicated a score of 26.

Habitual Prescription:

OD -15.25 - 0. 75 x 063 OS -15.00 - 1.00 x 153

A second prescription had also been prescribed for reading only, with essentially a +4.00 add equivalent in both eyes. Both corrections had six prism diopters of lateral prism in both eyes and four prism diopters of vertical prism in the right eye. However, she was using an over-the-counter hand magnifier for most reading tasks along with her distance correction; this was due to the magnifier being easier and more expedient for the task. A lateral /vertical tropia was noted in the right eye.

Entrance Visual Acuity was measured on two occasions prior to referral:

Right eye 5/400 Left eye 20/600

Trial frame refraction of the left eye indicated BCVA:

Left eye -18.00 –1.00 x 153 correcting to 20/300. The right eye could not be improved by conventional means.

Anterior segment evaluation revealed very narrow vertical palpebral fissures bilaterally, a clear cornea bilaterally, 2+ debris in the tear film OU, deep quiet 4+ anterior chambers with significant nuclear and cortical opacification. Intraocular pressure of OD 13, 14mm Hg, OS 14,15 mm Hg with the Tono-Pen.

Visual fields [Humphrey Visual Field (HVF), Goldmann Visual Field (GVF)] demonstrated generalized reduction and constriction to 30 degrees superiorly and inferiorly, with a horizontal field of 90 degrees with a V3e isopter in both eyes (GVF).

The patient was seen for a second visit to substantiate visual acuity, measure axial length and perform standardized echography. B-scan revealed a posterior vitreous detachment in both eyes with no presence of retina detachment, no retina/choroidal thickening, and a normal optic nerve and retrobulbar presentation. Immersion Biometry measurements indicated an axial length of right eye 26.96 and left eye 26.67mm.

A 50-minute consultation on why a referral for cataract surgery was indicated was presented to the patient, discussing the potential benefit of eliminating the aberrations of her myopic correction and lens opacification.

A clear corneal cataract surgery was performed on January 22, and January 29, 2009 on the right and left eye respectively, with no complications.

The patient was seen for two post-op evaluations (status post 5 and 6 weeks) for determination of her Best Corrected Visual Acuity (BCVA) and lens prescription. BCVA in the distance was right eye 20/500, left eye 20/40 + 1. Near visual acuity was .4M at 35cm.

The final prescription written was:

Right Balance Lens Left $+ 0.75 - 1.50 \times 094$ with a + 2.75 add

Three of the four patients have been seen for evaluation at six to eight weeks post-cataract surgery with no complications and significant clinical improvement in visual acuity (mean 4.5 line improvement in six eyes).

The final outcomes of these four patients is yet to be determined, with respect to activities of daily living, driving issues, functional vision, occupational and avocational activities and quality of life. However, it appears that cataract surgery in visually impaired persons is a reasonable direction as part of low vision rehabilitation.



Diagram of a normal eye and one with a cataract

William L. Park, OD, FAAO,

is in private practice in Wichita, KS. Dr. Park is committed to outreach efforts in stemming the epidemic of diabetes. He works exclusively with patients referred for low vision evaluation, low vision rehabilitation and neurological vision loss. He is a past Director of Low Vision Services, Lions Research & Rehabilitation Center, Wilmer Eye Institute-Johns Hopkins University. Dr. Park can be reached at William L. Park, OD, LLC, **www.parklowvision. com**, 610 N. Main, Suite 201 Wichita, KS 67203, **(316) 440-1690** or **drpark@parklowvision.com**.

REFERENCES:

I. Facts About Cataract. National Eye Institute, National Institutes of Health, Department of Health and Human Services. June 2004.

2. West S, Sommer A. Prevention of blindness and priorities for the future. Bull World Health Org.2001; 79:244-248.

3. Rubin GS, Bandeen Roche K, Prasada-Rao P, Fried LP. Visual impairment and disability in older adults. *Optom Vis Sci.* 1994; 71:750-760.

4. Rubin GS, West SK, Munoz B, Bandeen-Roche K, Zeger S, Schein O, Fried LP. A comprehensive assessment of visual impairment in a population of older Americans. *Invest Ophthalmol Vis Sci.* 1997; 38(3):557-568.

5. Massof RW, Hsu CT, Baker FH, Barnett GD, Park WL, Deremeik JT, Rainey C, Epstein C. Visual disability variables. I. The importance and difficulty of activity goals for a sample of low vision patients. *Arch Phys Med Rehabil* 2005;86:946-53.

6. Massof RW, Hsu CT, Baker FH, Barnett GD, Park WL, Deremeik JT, Rainey C, Epstein C. Visual disability variables. II. The difficulty tasks for a sample of low vision patients. *Arch Phys Med Rehabil* 2005;86:954-67.

7. Massof RW, Hsu CT, Baker FH, Barnett GD, Park WL, Deremeik JT, Rainey C, Epstein C. Visual disability variables. I. The importance and difficulty of activity goals for a sample of low vision patients. *Arch Phys Med Rehabil* 2005;86:946-53.

8. Massof RW, Hsu CT, Baker FH, Barnett GD, Park WL, Deremeik JT, Rainey C, Epstein C. Visual disability variables. II. The difficulty tasks for a sample of low vision patients. *Arch Phys Med Rehabil* 2005; 86:954-67.

9. Bailey RN, Indian RW, Zhang X, Geiss LS, Duenas MR, Saaddine JB. Centers for Disease Control and Prevention. Visual impairment and eye care among older adults - five States, 2005. MMWR Morb Mortal Wkly Rep. 2006;55(49);1321-1325.

10. Varma R, Wu J, Chong K, Azen SP, Hays RD; Los Angeles Latino Study. Impact of severity and bilaterality of visual impairment on health - related quality of life. *Ophthalmology*. 2006; (10):1846-53.

Programming Set for Envision Conference cont. from page 1



The program for **Envision 09** has been set, and we hope you will join us in beautiful San Antonio September 9 - 12.

Clinical Session Topics and Highlights

OPTICAL DEVICES AND PRESCRIBING **Practical Optics and Prescrib**ing Tips for Near Devices: Rebecca Kammer, OD Fundamental optics background for a low vision optometrist or ophthalmologist is one of the keys to successful low vision rehabilitation and should not be underestimated in its usefulness. This lecture provides a practical basis for applying optical principles to prescribing when integrated with

Fitting Bioptic Telescopes for Low Vision Driving: Dawn DeCarlo, OD

eccentric viewing training and the

timing of device introduction.

Bioptic telescopes can enable some people with vision loss to obtain a driver's license. This course reviews the literature on bioptic driving and teaches participants how to select candidates for driving, demonstrate the telescopes and appropriately fit and adjust them.

LOW VISION **AND DRIVING**

Conundrum....So Your Visually Compromised Patient Wants to Drive: William L. Park, OD; Tyler C. Hamilton, MA, COMS; Herb Simon, CDRI

This course discusses common driving skill deficits seen with mild, moderate and severe vision due to ocular and/or systemic disease. Discussions will include necessities of the clinical evaluation, telescopic devices, a bioptic telescope

loaning program, referral for O&M instruction and a certified driving instructor's take on driver's education and the road evaluation.

The Big D: Driver Assessment and Pre-road Training, a **Protocol that Works:**

Marlyn Lawrence, OT, CLVT; Wanda Smith, OT, CLVT

This presentation demonstrates the importance of evaluating patients prior to dispensing bioptic telescopes and providing training after dispensing. When vision, cognition, reaction time and physical parameters are evaluated in advance and training is provided, there are positive results.

TRAUMATIC BRAIN INJURY (TBI) TBI Related Vision Loss: From

Research to Clinical Practice: Gregory Goodrich, PhD

TBI is the signature injury of the wars in Iraq and Afghanistan, and visual impairments/dysfunctions frequently occur with traumatic brain injury. In this presentation, I will describe the findings of our research, and the programs developed to address these conditions as well as the challenges and lessons learned to date.

Visual Changes Following Blast Injuries:

Tonya Mennem, OT; Kia Eldred, OD

This presentation explores the most frequently identified visual changes following blast injuries. Screening questions and examination procedures will be discussed.

Intervention strategies and case studies will illustrate the use of a collaborative OT/OD model currently being utilized at the Michael E. DeBakey Veterans Affairs Medical Center (MEDVAMC).

Other topics include **disease** etiology, neuro-vision rehabilitation, multi-disciplinary models of low vision rehabilitation, adding low vision rehabilitation to your practice and many more.

The Envision Conference website has been updated to include the Envision 09 clinical and research sessions. Visit the Sessions & Events section at www.envision**conference.org** to find the times of each session. Click on the links to view clinical session descriptions and speaker bios. If you have any questions about workshops or clinical sessions at Envision 09, email Michael Epp at michael. epp@envisionus.com.



Special Sessions at Envision 09

The "Excellence through Collaboration" Symposium will be held Friday, September 11 from 4:00 to 6:00 pm. Presented by Duane Geruschat, PhD, Judith Goldstein, OD, Mary Lou Jackson, MD, Robert W. Massof, PhD, and Sandra Fox, OD, the symposium is entitled "Increasing the Evidence in Low Vision Rehabilitation -The Time is Now."

With the increasing prevalence of low vision, we are faced with the need to expand the provision of services and concurrently research ways to advance the delivery of care. This program focuses on the development and practice of the Low Vision Research Network (LOVRNET) with presentations made by the network investigators including case studies, data from research and upcoming planned clinical trials, and a call for a nationwide collaboration from all low vision rehabilitation providers.

The Envision 09 Mission Keynote will take place Saturday, September 12 from 11:30 am to 12:30 pm. Julia Burgos, the National Director of Latino Initiatives for the American Diabetes Association, will deliver a presentation entitled, "The Epidemic of Diabetes -Remediation through Professional Collaboration, Advocacy, **Research and Education.**"

Diabetes is at near-epidemic proportions and diabetic retinopathy is one of the leading causes of blindness in the United States, disproportionately affecting the Latino community. It is our responsibility to ensure that the services and information we provide are accessible to all who are affected by this devastating disease.

Julia A. Burgos is the National Director, Latino Initiatives at the American Diabetes Association (ADA). Julia is responsible for the expansion and oversight of Por Tu Familia, ADA's Latino Initiatives Program. She works to develop programs and train the Latino program staff throughout the country to broaden their reach in the Latino community about the seriousness and complications of diabetes.

Expand Your Experience, **Register for a Pre-Conference Workshop**

Envision 09 pre-conference workshops are a great way to receive hands-on training. The in-depth, extensive workshops will take place Wednesday, September 9, from 9:00 am to 12:00 pm and 1:00 pm to 4:00 pm. You may choose one from each time slot. Workshops are not included with conference registration, but may be purchased for an additional \$100 per workshop. Visit the Envision Conference website at www.envisionconference.org and click on the workshop you are interested in to view the summary.

Low Vision Research at Envision 09

Join us a day early for a free pre-conference research symposium, Wednesday, September 9.

Health Policy Issues and the Burden of Vision Loss:

Moderated by August Colenbrander, MD, Smith-Kettlewell Eye Research Institute and California Pacific Medical Center

The World Health Organization (WHO) is preparing the 11th revision of the International Classification of Diseases (ICD-11). This revision will be a major one, since it is aimed at serving not only the WHO's need for public health statistics, but also the terminology needs for Electronic Medical Records (EMR) and other Health Information Technology (HIT) applications.

The WHO has a special interest in defining the Global Burden

of Disease (GBD) as a means to compare the impact of various diseases and to set health policy priorities. For vision, this translates to the Burden of Vision Loss. a topic that is of special importance to vision rehabilitation. This free discussion will address this very important topic.

of Kansas Medical School -

Department of Ophthalmology

Many trends and practical ap-

plications, not to mention funding

and the lack thereof. dictate the

topics of research chosen by the

round table discussion is designed

to provide the venue for current

scientists to discuss the relevant

and vision rehabilitation science.

Topics to be discussed will also

include what areas of research

may be coming up short today

based on inconclusive or contra-

dictory findings and what areas of

research hold the most promise

The research program at the

Envision Conference is con-

vened by George Timberlake,

PhD, University of Kansas Medical

School - Department of Ophthal-

mology and James Nolan, PhD,

Envision Low Vision Rehabilitation

Center and University of Kansas

Medical School – Department of

Please contact James Nolan,

PhD with questions about the

research program at james.

nolan@envisionus.com.

Ophthalmology.

for the future.

issues of study today in low vision

scientific community. This free

Contact August Colenbrander, MD directly at gus@ski.org.

Current Trends in Low Vision and Vision Rehabilitation Research: Where and How Should Scientists be Focusing their Efforts? Moderated by James Nolan,

PhD, Envision Low Vision Rehabilitation Center and the University

Research Sessions at Envision 09

Research sessions at Envision 09 take place Thursday, September 10 through Saturday, September 12. Some highlights from the research program include:

General Research Session #1: Current Topics in Low Vision and Vision Rehabilitation **Research:** Moderated by **James** Nolan, PhD, Envision Low Vision Rehabilitation Center and the University of Kansas Medical School -Department of Ophthalmology

General Research Session #2: Current Topics in Low Vision and Vision Rehabilitation **Research:** Moderated by **George** Timberlake, PhD, University of Kansas Medical School – Department of Ophthalmology

Balance, Mobility and Falls: Theory and Practice: Moderated by J. Vernon Odom, PhD, West Virginia University Eye

Institute - Robert C. Byrd Health Sciences Center - West Virginia University

Science and Vision Reha-

bilitation: Moderated by Laura Walker Renninger, PhD, Smith-Kettlewell Eye Research Institute

Accessibility of Small Visual Displays: Moderated by **Ron** Schuchard, PhD, ASR[®] Device Study Group - Atlanta VA Rehabilitation R&D Center of Excellence, Emory University.

To view Envision 09 programming and to register, visit the conference website at **www.envisionconference.org.**

Please contact Michael Epp, Director, Outreach & Continuing Education, with questions about the Envision Conference at (316) 440-1515 or email michael.epp@envisionus.com.

San Tatsu Ryu Jiu Jitsu Martial Arts Program

Members of Envision's support groups and Envision blind and visually impaired employees can now participate in an extracurricular mar-🐝 tial arts

> program. Envision is working with Sensei David Reece, of San Tatsu Ryu Dojo, in order to provide weekly class instruction to blind and visually

impaired individuals. Two weekly classes, one for youth and one for adults, teach a progression of coordination and motor skills and progresses to necessary skills for a black belt and excellence in the liu litsu program. Instruction in Area Awareness focuses not only on teaching fighting skills, but life skills that can be used to keep one safe, as well as helping students to take advantage of opportunities. This program is offered to all Envision support group members, Envision After Hours members,

Assistive Technology Grant Available for Kansans with Disabilities

The loss of vision can be devastating. Low vision rehabilitation can train individuals with vision loss on the use of assistive technology, such as magnifiers, CCTVs (Closed Circuit Televisions), and specialized computers. With

the help of this equipment, people with vision loss can continue to read and retain a sense of normalcy in their lives.

Thanks to the generosity and partnership of the United Cerebral Palsy of Kansas (UCP-K), funds are available for Kansans with disabilities over the age of 60 in need of assistive technology. UCP-K. thanks to a Kansas Department on Aging grant and matching funds from the Cerebral Palsy Research Foundation of Kansas, will award up to one-half the



Low Vision Rehabilitation Center.

purchase price, not to exceed \$2,500, to individuals who need assistive technology such as magnifiers and CCTVs. The funds can also be used for Medicare or insurance co-pays and deductibles on eligible equipment. Financial requirements do exist, with a single income not to exceed \$50,000 and a family income not to exceed \$55,000. Call the Envision Low Vision Rehabilitation Center for more information. (316) 440-1600

ENVISION[®] Low Vision Rehabilitation D Ρ Α F

and Envision employees who are blind or visually impaired. There is a small charge for the uniform which is called a gi.

There is no cost for enrollment in the course or class instruction. **Call the Envision Low Vision Rehabilitation Center for more** information. (316) 440-1600

Karen Kendrick. OTR/L. CLVT demonstrates a CCTV at the Envision

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To submit an article or case study to be considered for publication in Visibility, please contact Michael Epp, Director of Outreach & Continuing Education, (316) 440-1515 or michael.epp@envisionus.com.

Envision Accessible Arts Programs Expanded

Art can give a visually impaired child or adult a tangible way to "map out" a confusing sense of the world. The arts can provide a stimulating and pleasurable way to view the sensory world. Art can help build confi-

dence, increase self-concept and cultivate independence and quality of life.

Envision has added several arts programs in ceramics and fiber arts to provide and promote the tangible benefits of art education and art-making for children and adults with vision loss. Providing access to the arts for people who are blind and visually impaired expresses Envision's belief that individuals who are visually impaired can equally



A member of Route 4-12, a support group for children, paints a plate at Wichita CityArts.

engage in creative arts through exploration and discovery. Day classes for low vision adults, after-school programs for visually impaired children and youth, and weekend workshops are available. Call the Envision Low Vision Rehabilitation Center for more information. **(316) 440-1600**



In this issue of Visibility, several articles focus on cataracts. As a component of Envision's public education initiative, new brochures on the etiology, prevention and common treatments of the leading eye diseases that cause vision loss and blindness have been produced. Spanish versions are also available. Brochures on diabetic retinopathy, macular degeneration, glaucoma, retinitis pigmentosa, stroke and cataracts are available. Multiple copies can be ordered through the **Envision Everyday** store: (316) 440-1680, or toll free (888) 311-2299

About Envision Low Vision Rehabilitation

The Envision Low Vision Rehabilitation Center provides comprehensive, multi-disciplinary low vision rehabilitation and services for people with vision loss. The center's goal is to help patients maximize their independence and realize their best functional vision. The center achieves this by offering a comprehensive low vision rehabilitation program unique to the needs of each patient. Envision provides low vision rehabilitation regardless of ability to pay. Call to find out about the availability of financial, medical assistance.

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If you would like to share Visibility with a colleague, please request a copy from Michael Epp, Director of Outreach & Continuing Education at **michael.epp@envisionus.com** or call (316) 440-1515. Visibility is also available online at **www.envisionus.com/Visibility**.



Vision Loss and Stroke