



The Pediatric/Vision Therapy Residency and the Brain Injury Clinic at The Eye Institute

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ABSTRACT

The Pediatric/Vision Therapy Residency at The Eye Institute of the Pennsylvania College of Optometry (PCO) at Salus University, one of the first such residencies in the country, was established in 1977. It is a challenging 54-week educational program that is designed to train entry-level graduate optometrists to provide competent and efficient care to pediatric and infant populations, and vision therapy to both children and adults.

One of the biggest attractions of PCO is its exceptionally strong clinical program. From day one, residents get invaluable experience with our diverse patient population. The Pediatric/Vision Therapy Residency provides the foundation for the management of binocular disorders, strabismus, amblyopia, traumatic brain injuries, learning-related vision problems, and vision therapy. Additionally, our Pediatric/Vision Therapy residents have the opportunity to enhance their skills in the diagnosis and management of ocular disease through our specialty services, such as emergency eye care, neuro-optometry, and retina service. The science-and research-driven atmosphere provides a unique learning and teaching experience for the residents as they work closely with faculty and students in the clinic.

The Pediatric/Vision Therapy Residency at PCO is a comprehensive program that assiduously prepares residents for the field of pediatrics and vision therapy, employing an appropriate level of supervision and support from highly-trained faculty, and eventually leading residents to clinical independence. With the re-opening of The Eye Institute in May of 2011 and the introduction of The Brain Injury Clinic in the summer of 2012, it has never been a more exciting time for residents at this institution.

SUMMARY

PCO fills two spots annually for the Pediatric/Vision Therapy Residency. The mission of the Residency in Pediatric Optometry/Vision Therapy is to:

- Train the entry-level graduate optometrist to provide competent and efficient care to routine pediatric and infant patients
- Prepare the residents to competently diagnose and manage:
 - Accommodative and non-strabismic binocular vision disorders
 - Strabismus and amblyopia
 - Learning-related vision problems
 - Vision problems associated with acquired brain injury
 - Ocular disease in the pediatric population
 - Emergency eye injuries in patients of all ages
- Provide an orientation and didactic program throughout the year; promote development of skills as an educator and self-learner; and provide a suitable environment in which the resident can flourish.

Primary Care Pediatrics:

Residents are assigned to the Pediatrics and Binocular Vision Service at The Eye Institute to provide direct care to patients and to supervise optometry students in the examination and management of children and infants with various vision conditions.



Binocular Vision Service:

During binocular vision evaluations, residents enhance their skills in the performance and interpretation of tests to evaluate and treat binocular vision, accommodative, and ocular motility disorders. When examining patients with strabismus and amblyopia, residents learn advanced diagnostic and treatment procedures, including objective and subjective assessments of comitancy, anomalous correspondence, suppression, eccentric fixation, accommodation, and eye movement ability.

Visual Information Processing Evaluation:

Residents learn to perform visual information processing evaluations, which include an assessment of visual spatial skills, visual analysis skills, visual motor-integration skills, attention and concentration, intelligence (screening), and reading skills (screening).

Brain Injury Clinic:

In this service, residents develop the knowledge and skills necessary to evaluate, diagnose, and manage patients with vision disorders secondary to head trauma and stroke. They provide direct care to patients with these conditions under the supervision of experienced clinical faculty at The Eye Institute.

Since the introduction of the official Brain Injury Clinic at The Eye Institute in the summer of 2012, the clinic has seen an increasing number of patients with acquired brain injuries every month. Health care providers at hospitals and clinics throughout the greater Philadelphia area refer both pediatric and adult patients to our clinic.

During the six-month period from July through December of 2012, the clinic examined 44 distinct traumatic brain injury (TBI) patients with a total of 92 exams, which included initial consultations and follow-up exams. The age of these patients ranged from 8 to 82 years with an average age of 31. Over 50% of the injuries we saw were due to concussions. The main causes of the concussions were sports-related followed by concussion secondary to motor vehicle accidents. Blur was the most commonly reported chief complaint, followed closely by photophobia, diplopia, and tracking issues in no particular order. The most common diagnoses were convergence insufficiency and accommodative disorders, and vision therapy and glasses were the most frequently prescribed forms of active treatment.



Vision Therapy:

On average, residents manage approximately 15 VT patients weekly. Residents are not only exposed to a variety of therapy techniques, but they also develop the skills to independently plan and implement VT for patients with accommodative, binocular vision, and ocular motility disorders, as well as learning-related vision disorders and disorders resulting from traumatic brain injuries.

Specialty Service:

These services enable residents to diagnose and manage ocular disease outside of the pediatric department. They have the choice of rotating through emergency, retina, neuro-optometry, and anterior segment services. In these services, they have the opportunity to work alongside specialty optometrists and ophthalmologists to enhance their ability to co-manage secondary and tertiary care patients through inter-disciplinary consultation and referral.

Didactic program:

Throughout the year, lectures and seminars are scheduled for residents. Seminars are held on a weekly basis, during which the Pediatric and Binocular Vision clinical faculty present various topics related to accommodative and binocular vision disorders, amblyopia, strabismus, learning-related vision disorders, traumatic brain injuries, infant eye care and pediatric eye care. In addition to these clinical topics, a significant amount of time is devoted to the practical aspects of developing and managing a vision therapy practice.

In addition, inter-disciplinary seminars are held for all PCO residents. PCO clinical faculty and guest speakers present various topics related to ocular and systemic disease, advanced prescribing and contact lens considerations, low vision, and pediatrics. Approximately thirty 90-minute presentations are scheduled during the residency year.



Teaching:

An important feature of the program is the preparation it provides residents for a potential career in optometric education. Residents are assigned to serve as clinical preceptors for students and have the opportunity to develop teaching skills. This preceptor mode of education also allows residents to examine and treat many more patients than they would in a direct care mode.

In addition, residents participate in the Grand Rounds program during the year by preparing and presenting cases to faculty, residents, students, and local optometrists. They are also required to prepare a paper of publishable quality before the end of the program.

Research:

PCO is actively involved in many ongoing research projects, including those funded by PEDIG (amblyopia, intermittent exotropia, prescribing for hyperopia, and convergence insufficiency). Residents have the opportunity to participate in ongoing studies or develop their own study.

Conclusion

The diverse nature of the patient population at The Eye Institute of the Pennsylvania College of Optometry at Salus University provides the foundation for residents to develop their existing skills to an advanced level and to cultivate new skills and knowledge. Graduates of this program develop the skills necessary to become leaders in the field of pediatric optometry and vision therapy, learn to provide care to patients with acquired brain injuries, and hopefully continue to promote and contribute to the optometric field, both through research and as optometric educators.