normal eyes and GFCCS. Quantifying the anatomical variance of the CB and CP in patients with pediatric glaucoma opens opportunity to better understand these disease processes.
Conclusions: UBM can be used to better understand the anatomy of patients with pediatric glaucoma. A better understanding of anatomical and structural changes may help guide therapeutic surgical approaches to these diseases.

048 Combined unilateral recession/resection surgery in the management of esotropia with near-distance disparity. Panagiota Antonopoulou, Mohammad W. Ghaffari, Adam Budd, Anna P. Maino
Introduction: To study the effect of unilateral combined recession/resection surgery in patients with near–distance disparity.
Methods: All children with esotropia and near–distance disparity of at least 14^{Δ} were recruited prospectively. Patients suitable for adjustable surgery or with previous strabismus surgery were excluded from the study. A satisfactory outcome was defined as esotropia of $<10^{\Delta}$ at near and distance, with full cycloplegic referactive correction, and reduction of near-distance disparity to $< 10^{\Delta}$.
Results: 22 patients were enrolled;17 with constant esotropia with accommodative element and 5 with convergence excess, of which 3 had normal AC/A ratio and 1 low. Median age was 7 years (range, 3-16). Mean preoperative angle was $35.4^{\Delta} \pm 11^{\Delta}$ for near and $18.2^{\Delta} \pm 10^{\Delta}$ for distance. Mean near–distance disparity preoperatively was $17.1^{\Delta} \pm 4^{\Delta}$. Two weeks after surgery, near-distance disparity had reduced to $5.8^{\Delta} \pm 5^{\Delta}$. At the final postoperative check (range, 6 – 24 months), mean angle for near was $10 \pm 5^{\Delta}$ and $5.5^{\Delta} \pm 3^{\Delta}$ for distance. Near–distance disparity was $4.5 \pm 4^{\Delta}$. 12 patients (55%) had $<10^{\Delta}$ esotropia at near and the remaining 10 measured between 12^{Δ} and 20^{Δ}.
Discussion: All patients had a satisfactory result for distance and 20 (90%) measured $<10^{\Delta}$ near–distance disparity. Stereopsis was demonstrated in 7 patients. No patients developed distance exotropia or convergence insufficiency.
Conclusions: Unilateral combined recession/resection surgery is a promising technique that addresses the challenge of near–distance disparity without the risk of overcorrection.

049 Pediatric ocular injuries: a 3-year follow-up study of patients presenting to a tertiary care clinic in Canada. Cyril Archambault, Assia Mekliche, Jordan Isenberg, Patrick Hamel, Rosanne Superstein
Introduction: Ocular traumas represent the most common cause of non-congenital blindness in children. Sports or sports equipment related injuries represent a major cause in children over the age of 10. However, activities differ depending on country and climate, suggesting that the mechanisms of trauma may vary according to region.
Methods: A retrospective review of all trauma cases presenting to the eye clinic at CHU Ste Justine, Montreal, Quebec between 2013 and 2015 was conducted.
Results: A total of 409 patients with a mean age of 7.74 years were included. Boys were injured more frequently than girls (60.4%). Most ocular injuries occurred between the ages of 2 and 9 years old (51.8%). The most common sport was soccer, followed by ball/ice hockey. Injuries occurred at home in 23.2% of cases. Final visual acuity was 20/40 or better in 77.0% of patients.
Discussion: This is the second epidemiological study examining causes and outcomes of pediatric ocular traumas in the province of Quebec. In our current sample, soccer was responsible for 33% of sports injuries, while nonorganized hockey for only 20%. This trend is similar to studies done in the UK and could indicate that soccer is increasing in popularity in Canada.
Conclusions: Our demographic findings are comparable with those of the only other Canadian study done on this subject. We are hoping that by identifying high-risk activities, health authorities will be able to plan better prevention strategies thus reducing vision loss and morbidity in the pediatric population.

050 Estimating cycloplegic retinoscopy by school bus accommodation-relaxing skiascopy (SBA-RS). Andrew W. Arnold, Stephanie L. Arnold, Jacob H. Sprano, Robert W. Arnold
Introduction: Accurate estimation of hyperopia as well as astigmatism axis and magnitude are challenging in delayed children. Conventional skiascopy holds rows of increasing power +/− lenses vertically in front of one eye. The SBA-RS child-friendly design holds convex lenses horizontally with a higher plus power fogging over the non-tested eye to relax accommodation.
Methods: In a prospective IRB study, patients had Retinomax autorefraction and SBA-RS refraction as a part of comprehensive pediatric eye examination with cycloplegia using cyclopentolate 1%.
Results: We examined 504 patients (0.3-66 years, mean 7.9 ± 9, median 6 years) of which 124 had delays. For astigmatism >1 D, cylinder power within 1 D of exam was achieved by 93% with SBA-RS and 85% with Retinomax, and axis within 10° in 90% with the bus versus 75% with Retinomax. Hyperopia of >1 D was found in 141; cyclo refraction was $+3.03 \pm 1.8$ D and cyclo-Retinomax 2.85 ± 2.0 D. SBA-RS without cycloplegia was 2.47 ± 1.7 D with neuro-delayed patients 0.36 D less than normals. Spherical equivalent actual refraction (Y) was predicted by SBA-RS (x): $y = 0.98x + 0.12$, $R2 = 0.95$ right eye and $y = 0.99x + 0.17$, $R2 = 0.94$ left eye.
Discussion: Accommodation-relaxing binocular horizontal skiascopy very precisely estimates astigmatism power and axis and only lags cycloplegic refraction by about 0.5 D in hyperopic patients fairly independent of neurodevelopmental delay.
Conclusions: Child-friendly, convex skiascopy can quickly estimate refraction even in many delayed patients reducing the need for cycloplegia.

051 Performance of a photoscreener with novel CR infrared wand strabismus estimation compared to another screening device and comprehensive examination. Stephanie L. Arnold, Andrew W. Arnold, Jacob H. Sprano, Robert W. Arnold
Introduction: The 2WIN photoscreener (Adaptica, Padua, Italy) has a new function, *Corneal Reflex* (CR), utilizing a visible-light occluder transmitting infrared flash so phorias and intermittent tropias can be estimated.
Methods: In a prospective IRB study, pediatric eye patients had pre-cycloplegia 2WIN photoscreening compared with Retinomax and cycloplegic refraction. The (CR) infrared occlusion wand was compared to prism cover test.
Results: Of 436 patients age 0.3 to 66 years: 172 were preschool, 245 school-age and 19 adults. 25% had developmental delays. For astigmatism patients ($>$ 1 D), axis was within 10° of exam in 74% with 2WIN and 78% with Retinomax. In astigmatism patients, 2WIN was within 1 D cylinder power in 81% of 2WIN refractions compared to 85% with Retinomax. For hyperopic ($>$ 1D) patients the 2WIN gave spherical equivalent 1.17 ± 1.02 D and Retinomax 2.21 ± 2.46 D compared to cycloplegic refractions $+3.55 \pm 1.88$ D. The CR strabismus horizontal deviation (y) was related to prism cover (x) with a strong correlation $y = 0.73x - 1.5$, $R2 = 0.65$ ($P < 0.01$). For 182