

children (64% with 2003 refractive and strabismic risk factors), 2WIN refraction screen achieved sensitivity, specificity and PPV of 59%, 86%, and 88% while adding CR improved to 69%, 88%, and 91%.

Discussion: 2WIN provided valid estimates of astigmatic power and axis and hyperopia compared to Retinomax in delayed and normal children and adults. The new CR strabismus function reliably estimated prism cover test in horizontal and vertical deviations.

Conclusions: CR wand with 2WIN is useful for community pediatric screening and strabismus clinic.

052 Numeric equivalents for alpha acuities: salvation for EMR research disasters. Robert W. Arnold

Introduction: You are interested to know how much vision improvement happened with your amblyopia care or cataract surgery? Your techs have labored costly hours to meticulously record patient data. Sounds simple, but your electronic medical record (EMR) CANNOT give you the answer. Why not?

Methods: Multiple EMRs were evaluated to determine whether the visual acuity fields (and refraction and motility fields) are either numeric or alpha formatted. Pediatric preverbal vision research and a previous digital conversion were reviewed.

Results: Many prominent EMRs have not formatted visual acuity fields as numeric in part because some adult patients have poor vision characterized as count fingers (CF), hand movement (HM), light projection (LProj), light perception (LP) or no light perception (NLP). Children also have alpha acuities: centered (C), steady (S) and maintained (M). An American and International logMAR paradigm is proposed to simplify digital conversion of typical alpha acuities: CSM (0.44), CS (0.86), C (0.97) in addition to NLP (2.50), LP (2.30), LProj (2.20), HM (2.00), CF (1.70).

Discussion: EMR 'upgrades' may prioritize billing over research, so programmers have defaulted certain data appearance by alpha designating variables that require numeric formats to be analyzable. Reconfiguration of refraction and strabismus field formatting is also needed.

Conclusions: Pediatric ophthalmologists (AAPOS) should lead the effort to scientifically classify infant vision and low vision designations so EMRs have a chance to improve.

053 Long-term outcomes of baerveldt glaucoma implant (BGI) in management of glaucoma following congenital cataract surgery (Gf-CCS). Jane Ashworth, Siddharth Agrawal, Bhamy Hariprasad Shenoy, Susmito Biswas, Cecilia Fenerty

Introduction: Glaucoma is the most common vision threatening complication following congenital cataract surgery. Previous studies have shown Glaucoma Drainage Implants (GDI) to be relatively safe in management of paediatric glaucoma including Gf-CCS. These studies have been limited by small sample size and limited follow-up. Aim of this study was to assess long-term outcomes of BGI in management of Gf-CCS.

Methods: Retrospective interventional case series of children <16 years who underwent BGI for Gf-CCS. Age at cataract surgery <12 months and minimum post-BGI follow-up of 1 year was essential for inclusion.

Results: Forty-seven eyes of 41 patients (6 bilateral, 35 unilateral) were analysed. Mean age at cataract surgery was 10.1 10 weeks. Mean age at glaucoma diagnosis was 16.7 20.3 months. Mean age at BGI surgery was 47.3 55.8 months. 39 eyes were aphakic and 8 were pseudophakic. Mean IOP reduced from 29.96 4.75 mm Hg preoperatively to 15.1 5.15 mm Hg at the last follow-up ($P = 0.000$). Mean

no. of glaucoma medication reduced from 2.9 1.02 preoperatively to 0.94 1.04 at the last follow-up ($p = 0.0000$). Mean duration of follow-up was 73.85 56.7 months (range, 12-193 months). One eye developed retinal detachment during the follow-up and resulted in no light perception vision. IOP < 21 mm Hg was maintained in 91.5% eyes at the last follow-up.

Discussion: Current study demonstrates that BGI results in effective control of IOP in children with refractory Gf-CCS. This study benefits from being the largest series with longest mean duration of follow-up.

Conclusions: BGI is a relatively safe and effective procedure for managing Gf-CCS in children and may be considered as the primary intervention in these cases.

054 The value of multiple telephone calls in ensuring follow-up after referral from vision screening. Chase R. Atiga, Connie J. Oh, Richard A. Ulangca, Leila M. Khazaeni, Jennifer A. Dunbar

Introduction: The success of a vision screening program depends on follow-up of referred children for comprehensive exam. This study evaluates the benefit of multiple phone calls to families of children referred from vision screening for scheduling follow-up appointments.

Methods: Families of children referred from vision screening between 9/2015 and 4/2018 were called up to 3 times to provide referrals and confirm follow-up. Children with scheduled appointments were marked 'completed follow-up'. Follow-up confirmation responses were compared according to number of call attempts made. Follow-up nonconfirmation responses for 1st calls, 2nd calls, and consecutive call responses were compared; χ^2 tests were performed for comparisons.

Results: 1928 (62%) referred children reported follow-up. 7102 telephone calls were made. Follow up yield after the 1st call was 25%. Of those children remaining, a 2nd call yielded 29% and a 3rd call 28% ($P = 0.007$). For 1st ($P < 0.001$), 2nd ($P < 0.001$), and consecutive ($P < 0.001$) call response comparisons, the "answered phone, without scheduled appointment" group ($n = 116$ [66%]; $n = 156$ [66%]; $n = 43$ [68%]) had higher follow-up than those "left a message" ($n = 397$ [36%]; $n = 277$ [28%]; $n = 215$ [26%]), which had higher follow-up than the "unable to reach" ($n = 32$ [18%]; $n = 29$ [15%]; $n = 11$ [10%]).

Discussion: Improved communication following vision screening reduces barriers to follow-up compliance. In this study, follow-up rates increased with multiple phone calls compared to one phone call. Follow-up rates were higher for families reached by telephone than those for whom messages were left or who were unreachable.

Conclusions: Reaching families by pursuing multiple telephone calls is effective in increasing follow-up rates after vision screening referral.

055 Single lateral rectus resection in adult nonaccommodative esotropia. Vanessa K. Avellaneda-Chevrier, Helen A. Kim, Mrunalini D. Parvataneni

Introduction: One muscle strabismus surgery is typically avoided due to concerns about undercorrection or ocular incomitance. We report the results from a series of patients who underwent single lateral rectus resection to treat a symptomatic moderate angle nonaccommodative esodeviation.

Methods: A retrospective chart review was performed for 19 patients (aged 21-85) who were surgically treated with either a 6.0 mm or 6.5 mm unilateral rectus resection. Patients with esotropia between