Will be discussing general tips in examining children throughout talk.

Will give expected results of each test based on age/maturity of child (ie 3 year old should get Wirt fly and maybe a couple animals/circles, but shouldn’t be expected to complete that whole test. So a pass may simply be 2/3 animals for example).

**Binocular Vision:**

1. Stereoacuity  
   - Wirt/Randot  
   - Randomdot (Preschool Randot, Lang)
2. Worth 4 Dot for Fusion
3. Motor Fusion testing in <3yrs

**Ocular Movements:**

1. Versions and Ductions  
   - Fun toys of multiple sizes and brightness  
   - Toys can make sound if you simply need to get their attention into the gaze you want them to look at. Toys with sound should not be used if you’re trying to assess whether they can fix and follow

**Visual Acuity:**

Babies <6mos  
- Fix and follow  
- Binocular Fixation Pattern  
- Teller Acuity Cards (6-12 mos of age)

Babies 6mos – 2yrs  
- Binocular Fixation Pattern  
- Cardiff Cards (over 12 mos of age)

Toddlers (2-3yrs)  
- Lea picture cards  
- Binocular Fixation Patter

Young children (3-4 yrs)  
- Lea picture cards
- Hotv singles/single line

Kindergarteners (4-5)
- Hotv single line/full chart
- Lea crowded (single line/full chart)

Discuss:
- Single vs crowded vision
- Which eye to test first and why
- Behaviours while doing a VA test (ie overly distracted, missing/skipping letters but only for one eye) can indicate amblyopia
- Definition of amblyopia

**Bruckner (Red Reflex) Test**
- How to do it
- What you can use it for

**Amblyopia**

**Definition**

**Classification**
1. Anisometropic Amblyopia
2. Ametropic Amblyopia (High refractive errors bilaterally, hyperopia >5D and myopia > 6 D)
3. Strabismic Amblyopia
4. Sensory Amblyopia
5. Organic Amblyopia (coexist with structural problems)

**Diagnosis**
- Vision screening
- Different tools for different ages

**Treatment:**
- Treatment of structural problem, e.g. Ptosis, cataract, etc.
- **REFRACTIVE CORRECTION**
- Cycloplegic refraction is essential
- Full time glasses for few weeks before occlusion treatment
- Occlusion
  - Full time Occlusion
  - Part time Occlusion
- Optical Degradation (Penalization)
- Diffusing filters, Bangerter foil
- Plus power lenses (fogging)
- Pharmacological penalization (Atropine 1%, Homatopine 2% or 5%)
- Binocular experience, Dichoptic iPad game play, new, unproven results in kids yet

**Complications of Treatment:**

- Reveres amblyopia
- Close follow up is important for full time patching at young age

**Compliance Issue:**

- Parents’ understanding is the key
- Established daily routine
- Restrain for <1 year of age, Reward for > 3 year of age
- Toddlers (age 1-3) are particularly challenging

**Treatment Failure and Recurrence:**

- Despite all the effort some children do not respond to any treatment
- Decision to initiate or continue treatment in difficult cases should be made the
  Patient and by family, these are usually older children>5
- My definition of failure is fail to improve vision with 2 course of 3-6 months treatment with
good compliance
- Recurrence happens in 25% of patients after completion of treatment
- Often respond well to maintenance treatment regimen
- Periodic monitoring until age 8-10
- Follow up every 6 months until age 12
- Vision gain is usually sustained after age 12