Prescribing for the Hyperopic Child
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Abstract:
The prescribing of hyperopia for reasons other than strabismus and amblyopia has often been challenged. Surveys between optometrists and ophthalmologists have revealed differences in prescribing philosophies, especially in the frequency of prescribing at lower levels of hyperopia (<3.00D). This course will help practitioners in general practice with guidelines and examination strategies for making hyperopic prescribing decisions in children and adolescents.

Learning Objectives:
• Develop a diagnostic strategy to aid in hyperopic prescribing decisions
• Recognize key indicators for hyperopic prescribing other than magnitude
• Explain the rationale for individual prescribing decisions
Infant ≤ 12 months old

- VA (Teller, Cardiff, or LEA Grating)
- Ocular Alignment (Hirschberg/Kappa)
- Accommodative status (MEM)
- Cycloplegic Retinoscopy (0.5% Cyclopentolate)

Low Hyperopia
- No Rx, monitor

Moderate Hyperopia
- ET
  - Rx full (+)
    - Normal VA
      - No Rx, monitor
    - ↓ VA (< 6/100 or 20/333)
      - Prescribe (+) to normalize accommodation

High Hyperopia
- ET
  - Rx full (+)
  - Cut Rx by +1.00 to +2.00 DS
- No ET
  - No Rx, monitor
> 12 months to < 5 years

- VA (Cardiff, LEA, or HOTV)
- Ocular Alignment (Cover test, and/or Hirschberg/Kappa)
- Accommodative status (MEM)
- Cycloplegic Retinoscopy (1.0% Cyclopentolate)

Low

- No Rx, monitor

Moderate

- ET
  - Rx full (+)
  - Normal VA
    - No Rx, monitor
    - Prescribe (+) to normalize accommodation

- No ET
  - Abnormal Accom
    - ↓ VA
      - No Rx, monitor

High

- ET
  - Rx full (+)
  - Cut Rx By +1.00

- No ET
  - Normal Accom
    - No Rx, monitor

Consider:
- Developmental milestones
- Academic performance
- Behavioral concerns
School-Aged Child > 5 years

- VA (HOTV, Snellen, or Sloan)
- Ocular Alignment (Cover test, Phorometry)
- Accommodative status (MEM, Accom Amplitude & Facility, NRA/PRA)
- Binocular function status (NPC, Vergence ranges, Stereopsis)
- Refractive status (Subjective refraction, Dry Retinoscopy, Cycloplegic Retinoscopy)

Low/Moderate Hyperopia
- ET
  - Rx full (+)*
  - Normal Accommodative & Vergence skills
  - No Rx, monitor

No ET
  - Abnormal Accommodative &/or Vergence skills
  - Prescribe to normalize Accommodative AND Vergence systems

High Hyperopia
- ET
  - Rx full (+)**

No ET
  - Partial Rx

Consider:
- Developmental milestones
- Academic performance
- Behavioral concerns

* Consider trial full Rx for small angle ET, otherwise refer for strab tx
** Consider ability to tolerate full Rx at this age
Summary

• Amblyopia and Strabismus not the only things to consider

• Infants- consider emmetropization

• Toddler/Preschooler- consider developmental milestones

• School Aged- consider school/near demands

Definitions

<table>
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<tr>
<th>Hyperopia</th>
<th>Refractive condition in which the light entering the non-accommodated eye is focused behind the retina</th>
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<tbody>
<tr>
<td>Significant hyperopia</td>
<td>Any degree of hyperopia sufficient to cause symptoms requiring remediation</td>
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<tr>
<td>Anisometropic hyperopia</td>
<td>Unequal and significant hyperopic refractive error</td>
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<tr>
<td>Isoametropic hyperopia</td>
<td>Equal and significant hyperopic refractive error</td>
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<tr>
<td>Absolute hyperopia</td>
<td>Hyperopia that cannot be overcome by accommodation</td>
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<tr>
<td>Facultative hyperopia</td>
<td>Hyperopia that can be overcome by accommodation</td>
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<td>Latent hyperopia</td>
<td>Hyperopia that is habitually overcome by accommodation; determined by cycloplegic refraction</td>
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<tr>
<td>Manifest hyperopia</td>
<td>Hyperopia (either facultative or absolute) that is determined by non-cycloplegic refraction</td>
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<td>Physiologic hyperopia</td>
<td>Hyperopia due to correllational hyperopia or component hyperopia having otherwise normal ocular anatomy</td>
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<tr>
<td>Pathologic hyperopia</td>
<td>Hyperopia due to abnormal anatomy, maldevelopment, ocular disease, or trauma, not to normal biological variation</td>
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Consensus resource guide for the prescribing of hyperopia:

- Optometric Clinical Practice Guideline: Care of the Patient with Hyperopia (http://www.aoa.org/documents/optometrists/CPG-16.pdf)
- Pediatric Eye Evaluations Preferred Practice Patterns: Guidelines for refractive correction in infants and young children (http://one.aao.org/asset.axd?ID=252bcefd-075c-4c71-bafd-03e72d47fa39)