Massachusetts Vision Screening

Nuts and Bolts

PowerPoint Presentation for Staff Education!

Dec. 2005
Where to Start???

- Use 2005-2006 school year to implement
  - Don’t rush the process!!!!
  - Remind your staff that these are the first changes in 50 + years!
  - Rome wasn’t built in a day
  - Take time to train your staff
  - Have a plan
  - Consider piloting the new tools in one school this year
Building on What We Know…

- Spring 2005, MDPH offering training on pre”school” vision screening
- This included far vision screening and the introduction of the Random Dot E for Stereopsis
- Protocol the same for Preschoolers and Kindergarten Students
# Massachusetts School Vision Screening Protocols

**Effective 9/05**

<table>
<thead>
<tr>
<th>Screening Test</th>
<th>Distance</th>
<th>3 yr old Preschool</th>
<th>4 year old Preschool/Kindergarten</th>
<th>Grade 1-3</th>
<th>Grade 4-12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Monocular Linear</td>
<td>Wall chart or MassVAT @ 20/40</td>
<td>Wall chart or MassVAT @ 20/30</td>
<td>Machine, Wall Chart, or MassVAT @ 20/30 Near card of machine with near slide</td>
<td>Machine, Wall Chart, or MassVAT @ 20/30 Near card or machine with near slide</td>
</tr>
<tr>
<td></td>
<td>Binocular Linear</td>
<td>All @ 20/30</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Stereo Ocular Alignment</td>
<td>Random Dot E</td>
<td>Random Dot E</td>
<td>Random Dot E</td>
<td>Random Dot E</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Other tools we need...

- **Eye Occluder**
  - For distance-monocular vision screening with wall chart or Mass VAT cards

- **Tape Measure**
  - Mark 10 feet for wall chart and Mass VAT
  - Mark 4 feet for Random Dot E

- **Good lighting!**
Don’t forget to have the child wear his/her glasses!
Linear Distance Visual Acuity

- **Linear**
  - “Symbols” – HOTV symbols, Snellen Letters or Tumbling E’s – are lined up in a row, not individual letters on a line

- **Distance**
  - Far vision screening at 20/30 (20/32) for age 48 months thru grade 12 (20/40 for 36-48 months).
  - Monocular – one eye screened at a time
New Mass VAT Distance Vision Screening Tool
Pre-Kindergarten/Kindergarten Vision Screening: Far Vision Screening

- Use MassVat Cards or similar tool – **do not use machine!**
- Measure 10 feet from child to screening cards
- Place matching card in front of child
- Explain what you will be doing and practice with child at closer distance
- Cover left eye
- Child must identify 4 out of 5 “symbols”
- At 20/40 < 48 months
- At 20/30 > 48 months
- Repeat with right eye covered
Pre-Kindergarten/Kindergarten Vision Screening: Far Vision Screening – Tips for Success!

- Child does not need to know his letters – place sample card in front of child
- Play “matching” game with letters or symbols
- Do not have your finger cross the black border line of the linear letters/symbols-this causes a visual disturbance
- Practice close up with both eyes open
- Game too easy! Tell them you will make it “harder” by covering one eye and moving further away
Wall Chart
- Many Varieties
- HOTV
- Lea
- Tumbling E's
- Line (Snellen) Letters
Far Vision Screening: Using a Wall Chart

- Procedure essentially the same as the Mass VAT Cards!
- Mark 20/30 line for quick identification!
Random Dot E – test side of cards
“a.k.a. the Magic Glasses Game!”
Random Dot E Test Kit - Answer side of cards

“a.k.a. the Magic Glasses Game!”
Pre-Kindergarten/Kindergarten/Gr. 1-3 Vision Screening:
Random Dot E Test

- Measure 4 foot distance
- Show child 3 dimensional E and practice having child identify the card with the “picture” (sample card)
- Move to appropriate 4 foot distance
- Shuffle tests cards behind back and present to child
- Child must identify 4 out of 5 cards with the “picture”
Pre-Kindergarten/Kindergarten/Gr. 1-3
Vision Screening:
Random Dot E Test – Tips for Success!

- Tell the child that “sometimes, while wearing the magic glasses, he may see a “picture” appear on the card.
- Child does not need to know his letters or that the image is an “E”
- With the magic glasses on, practice using the sample card and blank, then substitute the card with image
- Suggest you will make game harder by moving further away
Pre-Kindergarten/Kindergarten/Gr. 1-3
Vision Screening:
Random Dot E Test – More Tips for Success!

- Cards should be held at eye level
- Word “Raised” must be at top of card back, otherwise the picture will be “Recessed”, rather than sticking out!
- Slightly rotate card up and down to pick up the light
- Note: it takes a few seconds for the image to appear
Pre-Kindergarten and Kindergarten Vision Screening

What you need…

- Far Vision Screening
  - MassVat Cards with HOTV or Lea Symbols
  - Or
  - Wall Chart with HOTV or Lea
- Plus
  - Tool to cover eye not being screened
  - Sample cards child may use for identification
  - Measured distance of 10 feet from child’s eye to screening tool
  - Enthusiasm!
Pre-Kindergarten and Kindergarten Vision Screening

What you need...

● Stereopsis and Ocular Alignment Testing
  ● Random Dot E Kit
    ● Includes sample card, blank card, and card with image plus polarized “Magic” glasses
    ● 4 foot testing distance
    ● Encouragement!
Pre-Kindergarten and Kindergarten Vision Screening
What you need don’t need…

- Vision Screening Machine
  - Use of vision machine discouraged!
- Mechanism to test near vision
Vision Screening Grades 1-3
What you need...

- Far Vision Screening
  - Wall Chart (10 ft or 20 ft)
    - or
  - Testing machine with far distance slide
    - Or
  - Could use Mass VAT Cards
- Screening Tool may have
  - HOTV
  - Line Letters
  - Tumbling E’s
- Eye Occluder for Monocular testing if using Wall Chart/Mass VAT
Vision Screening Grades 1-3

What you need…

 champs
  * Near Vision Screening
    * Near vision screening card at 14 inches
    Or
    * Vision testing machine with near slide
  * Screening Tool may have:
    * HOTV
    * Line Letters
    * Tumbling E’s
Near Vision Tester Card

Newer version such as this one less complicated!
Linear Near Visual Acuity

- Linear
  - “Symbols” – HOTV symbols, Snellen Letters or Tumbling E’s – are lined up in a row, not individual letters on a line

- Near
  - Near vision screening at 20/30 (20/32) grade 1 thru 12
  - Binocular – Read with both eyes!
String is appropriate 14” length and should be held at temple
Near screening binocular- both eyes!
On this card, you could use the HOTV or Snellen Letters
Top row is for practice –
Middle row is near 20/30 distance for screening –
Bottom HOTV for matching with younger children
Near Vision Screening - Other Near Cards

- Vendors offer a variety of types
- Some Near Cards have linear letters at graduated variety of distances like a far wall chart, 20/200, 20/100, 20/80, etc.
- If using a card with multiple rows, mark testing row at edges with possibly a red dot so child can zero in on the row you want him to read – 20/30
- Maintain 14 inch or other designated testing distance
Vision Screening Grades 1-3
What you need...

- Stereopsis and Ocular Alignment Screening
  - Random Dot E Kit
    - Includes sample card, blank card, and card with image plus polarized “Magic” glasses
    - 4 foot testing distance
    - Encouragement!
Vision Screening Grades 4-12

- Far Vision Screening
  - Wall Chart (10 ft or 20 ft)
    - or
  - Testing machine with far distance slide
    - Or
  - Could use Mass VAT cards
- Screening Tool may have
  - HOTV
  - Line Letters
  - Tumbling E’s
- Eye Occluder for Monocular testing if using Wall Chart/Mass VAT
Vision Screening Grades 4-12

- Near Vision Screening
  - Near vision screening card at 14 inches
    - Or
  - Vision testing machine with near slide
- Screening Tool may have:
  - HOTV
  - Line Letters
  - Tumbling E’s
Vision Screening Grades 4-12

- Stereopsis and Ocular Alignment Testing
  - Does not need to be done routinely as part of standard screening!
  - Random Dot E kit may be used if you have a concern
  - No “ball in the box”
Do I have to buy all new equipment?

- What do I need?
  Screening tools for:
  - Distance
    - Pre/k
    - Grades 1-12
  - Near
    - Grades 1-12
  - Stereopsis
    - Pre-grade 3

- What do I have?
  - Wall Chart
  - Vision Tester
  - Near Card
  - Random Dot E
  - Plus slide
  - Color vision kit
  - Other
Equipment Assessment

- Bring all vision equipment together to assess
- May need or use different equipment for different schools/grade levels
- Solicit vendors’ help
- Once needs assessment is “costed out”, consider contacting Lion’s Rotary, PTO, etc.
Equipment Assessment: Consider creating a chart

### North Andover Public Schools
**Vision & Hearing Equipment Repairs/Upgrades**  
**July 1, 2004**

<table>
<thead>
<tr>
<th>School</th>
<th>Machine</th>
<th>Insert New Slide</th>
<th>Insert New Slide</th>
<th>Cleaning?</th>
<th>Repair</th>
<th>Calibration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thomsom</td>
<td>Optec 5000</td>
<td>*****</td>
<td>HOTV Binocular</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Bradstreet</td>
<td>Optec 2000</td>
<td>HOTV</td>
<td>HOTV Binocular</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Sargent</td>
<td>Optec 2000</td>
<td>HOTV</td>
<td>HOTV Binocular</td>
<td>yes</td>
<td>Yes, slide adjustment</td>
<td>yes</td>
</tr>
<tr>
<td>Kittredge</td>
<td>Old Optec 2000</td>
<td>HOTV</td>
<td>HOTV Binocular</td>
<td>yes</td>
<td>Yes, height adjustment</td>
<td>yes</td>
</tr>
<tr>
<td>Adkinson</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>yes</td>
</tr>
<tr>
<td>Franklin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>yes</td>
</tr>
<tr>
<td>Middle School</td>
<td>Titmus OV-7M</td>
<td>No part available</td>
<td>No part available</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>High School</td>
<td>Titmus OV-7M</td>
<td>No part available</td>
<td>No part available</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>St. Michael's</td>
<td>Optec 2000</td>
<td>HOTV</td>
<td>HOTV Binocular</td>
<td>yes</td>
<td>Yes, height adjustment, ball bearing missing</td>
<td>yes</td>
</tr>
</tbody>
</table>

Replacement slides in box.

Concerns/Questions – Contact Katie Vozeolas, Lead Nurse, H 978-688-5499 or cell 978-758-2604
**Vision Testers**

- Is mine still useful?
- Use information provided with your vision tester to help assess!
Another tool –
Vendor info for a specific slide
Vision Referral Process

- Update referral letters to reflect new guidelines
- Give your self credit for what you do!
- Educate the parent/physician in the letter
North Andover High School Health Office
430 Osgood Street
North Andover MA 01845
978-794-1711 ext. 1053

Date: ________

Dear Parent/Guardian,

School vision screening tests, recently performed at North Andover High School, indicate that your child, ________________, was tested (with glasses/contacts on) and did not pass the screening.

Children’s eyes can change over a period of time. Perhaps you already have had your child examined by an ophthalmologist. If so, please write a note to that effect and have the enclosed form completed by the eye specialist and return it to the school health office.

If your child has not seen an eye specialist recently, it is advisable to have an examination as soon as possible. When you go, please ask the physician to complete the enclosed form and return it to us.

It is very important that we have this report from the eye specialist to incorporate any recommendations that will assist us in helping your child do his/her best at school.

If you have any questions, please call me at Bradstreet: 978-794-1711 ext. 1053.

Sincerely,

Katie Vozzeolas, School Nurse
Enc.
Dear Physician:

As you know, school children are screened for vision problems as required by Massachusetts General Law. North Andover has implemented the Enhanced School Vision Guidelines developed by DPH and released in September 2005, which include far vision (preschool-grade 12), near vision (grade 1-12) and stereopsis for preschool through 3rd grade.

The child indicated below did not pass the following component(s) of the vision screening:

<table>
<thead>
<tr>
<th>Screening performed</th>
<th>Tool used for Screening</th>
<th>Screening Result</th>
<th>Other (glasses/contacts?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear Distance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear Near</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stereopsis/Ocular Alignment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color (performed only &quot;as needed&quot;)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Parents of those children failing the screening are asked to take the child to a vision specialist for evaluation. If the child is already under care, we need updated information for the child's school health records.

In order that we may provide any educational adjustments you recommend, please complete the form below and have the parent return the form to the school health office.

Sincerely,

Katie Vozoulas, School Nurse,
978-794-1711, ext. 1053

Child’s name: __________________________ Date of Examination: __________________________
School: __________________________ Grade: __________________________

Brief summary of significant findings: ____________________________________________________________

Diagnosis: ___________________________________________ Treatment: ____________________________
Prognosis: ___________________________________________ Return Visit recommended in _______ months.

I advise the following education adjustments for the child:

☐ None at present
☐ Preferential seating in classroom Front ______ Rear ______
☐ Glasses for full-time use in school
☐ Glasses for part-time use in school. Specify: __________________________
☐ Other recommendations __________________________

Signature: __________________________ Phys./Practice Name: __________________________
Address: __________________________ Telephone: __________________________
May 12, 2005

Dear Parent/Guardian,

Today I am sending you a second notice regarding a vision referral. The first referral was sent in late fall or this winter.

The Massachusetts School Vision screening program has been one of the most successful initiatives implemented by the Department of Public Health fifty years ago. Though our testing is “screening” and not diagnostic, our referral confirmation rate is quite high (92% of referrals sent for vision confirm a vision disturbance). Our big focus this year has been the implementation of stereopsis testing which looks at how the two eyes work together. There is a new state initiative underway requiring this testing of all incoming kindergarteners starting next fall!

If you have already had your child’s vision checked, please give me a call at Bradstreet and let me know what the findings were. If you have already forwarded me the completed referral, let me know and I will try to rectify the situation. If your child has not seen an eye specialist since the original referral was sent, I encourage you to make an appointment and have your child’s vision checked.

I thank you for your attention to this matter and encourage you to call with any questions. Thank you for your attention to this matter.

Sincerely

Katie Vozelos
Bradstreet School Nurse

Cc: Marybeth Keane, Building Administrator
# North Andover Public Schools
Vision Screening Referrals
K-3\textsuperscript{rd} Grade

<table>
<thead>
<tr>
<th>Child's Name</th>
<th>Class</th>
<th>Date of Initial Screen</th>
<th>Date of Rescreen</th>
<th>Far Vision</th>
<th>Near Vision</th>
<th>Random Dot E</th>
<th>Date Referral Sent Home</th>
<th>Date Referral Returned</th>
<th>Referral Results</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
We’re done!

- Remember, the vision screening program is one of the most successful initiatives impacting kids
- Thank you for what you do for our kids!