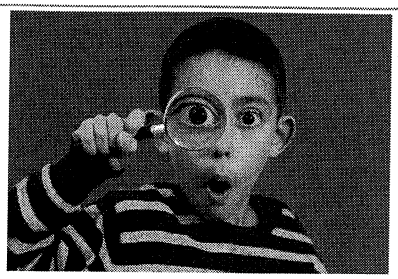
VISION SCREENING



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1

What is Vision Screening?

Vision screening is a simple, **non-diagnostic** procedure that indicates whether a child has a vision problem.

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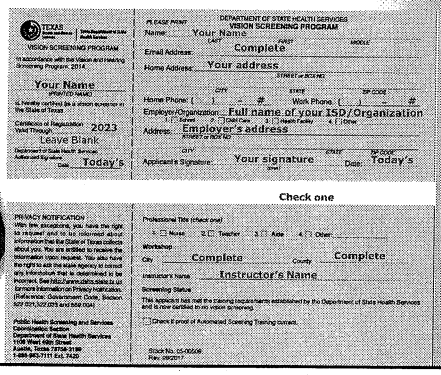
Registration Card



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Why is Vision Screening Important?

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- Estimated 80 % of learning is visual
- Catching a problem early can have a profound effect on a child's life.

5

INTRODUCTIONS

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3

Screening Programs

1. Determine if a child's vision falls within the normal range.

2020 VISION

2. Answer the question: Does the child need assessment?
3. Identify children and refer to their primary care provider for follow up.

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Topics to Discuss

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- Introduction to the essentials of vision screening
- Types of vision problems
- Specific procedures used in vision screening
- Recording and referral procedures
- Online reporting for DSHS

7

Who Must Be Screened?	When Screening Must Be Done
4 years old by Sept. 1 Kindergarteners Any other first time entrants (4 years through 12th grade)	Within120 days of admission.
Grades 1st, 3rd, 5th, and 7th	Any time within the school year. (preferably within the first semester)

10

Question

Have you had any personal experience with vision related problems?

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8

DSHS also recommends screenings for:

- Transfer students without current vision screening records.
- Students returning from an absence resulting from a communicable disease.
- Students referred by teachers, parents or others.
- Children who repeat a grade and who have not been screened within the last year.

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SCREENING SCHEDULE AND REQUIREMENTS

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TEXAS SCREENING REQUIREMENTS

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Record distance **acuity** for the right and left eye using one of the following:

Sloan Letter Chart

HOTV Chart (crowded version is preferred)

Acuity: a sharpness of vision that is measured and recorded using an internationally recognized two-figured indicator, such as 20/20

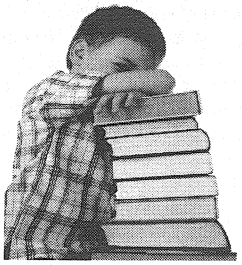
12

Recording and Reporting Requirements

- Facilities may use either the M-60 form on page 53 in the Appendix of the Vision Manual, or their own form that includes the same information.
- Submit summary of results online at **http://chrstx.dshs.state.tx.us** between January 15 and **June 30** each year.

13

ESTABLISHING A SCREENING PROGRAM



16

Recording Requirements

The following data must be recorded!

- Full name of child.
- Birth date or age of child.
- Date of the screen.
- Name of the screener (printed and signed).
- Type of screening.
- Any signs or symptoms of a vision problem.
- Whether the child was wearing corrective lenses during screening.
- Acuity for each eye or pass/fail if using automated screening devices.
- Results of any other screening performed.

14

Ideal screening procedures follow the American Association for Pediatric Ophthalmology and Strabismus (AAPOS) guidelines.

17

QUESTION

Why is it important to screen children at a young age?

15

Vision Screening Program Objectives

1. Identification of a possible problem.
2. Referral to a primary care provider for diagnostic evaluation.
3. Educational consideration and recommendations to maximize learning potential.
4. Tracking and follow-up of all referrals for evaluation of program's effectiveness.

18

Vision Screener Objectives

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- Recognize signs of vision problems.
- Create an appropriate screening environment.
- Determine which screening chart to use.
- Train the child to respond accurately to symbols on the chart.
- Pretest to determine appropriateness of your chart selection.
- Demonstrate proper screening and recordkeeping procedures.
- Determine pass/fail, rescreen, and referral status.
- Understand follow-up procedures for children who fail the screen.
- Understand online reporting procedure.

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THE EYE AND THE SIGHT PROCESS

22

This training will help you establish a screening program that meets all of the aforementioned objectives and goals.

20

Sight Development

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Sight development involves the brain's ability to receive and interpret messages sent by the eye. Many authorities believe that eyesight is not fully developed until children are about 7 or 8 years old.

23

QUESTION

What are some characteristics of an effective screening program?

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Binocular Vision

Understanding the development of the sight process will help you to understand the ultimate goal of good vision—**binocular vision**.

Binocular vision: the ability to use both eyes at the same time to focus on the same object and to combine the two images into a single image, giving good depth perception.

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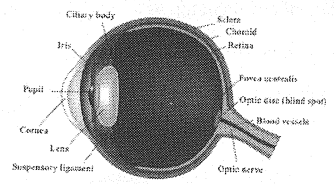
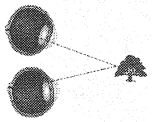


25

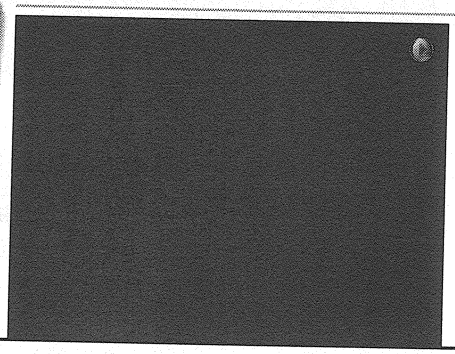
Fusion

Binocular vision occurs when both eyes automatically adjust so that the image being viewed falls on the same parts of each retina. The two images blend and form a single image in the brain; this process is called **fusion**.



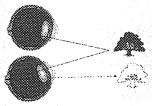
28

THE EYE AND THE SIGHT PROCESS



Suppression

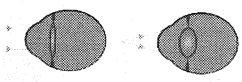
When one eye deviates and the two images do not fall on the same parts of the retina, double images result. The brain will not tolerate double vision and will turn off the unwanted image, resulting in **suppression**.



29

Accommodation

To focus, the lens changes shape through the action of ciliary muscles, known as **accommodation**.



Accommodation: adjustment of the lens by means of the ciliary body in order to focus an image on the retina.

Amblyopia

Suppression can result in the development of amblyopia.

Suppression: when the image of an object from one eye is not perceived.

Amblyopia: a dimness of vision or reduced **visual acuity** in one eye, not usually correctable by a lens.

Visual acuity: the relative ability of the visual organ to resolve detail that is measured and recorded using an internationally recognized, two-figured indicator, such as 20/20.

30

QUESTION

What is the ultimate goal of good vision?

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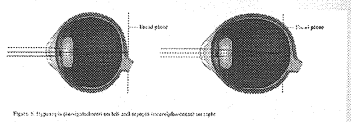
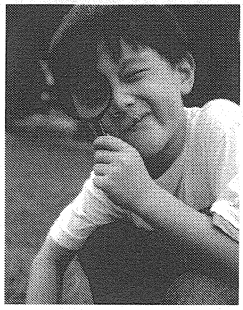
Examples of Refractive Errors

- Farsightedness (hyperopia).
- Nearsightedness (myopia).
- Astigmatism (unequal refraction within the same eye).



34

VISION PROBLEMS



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FARSIGHTEDNESS

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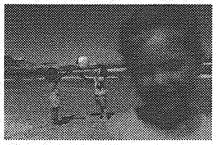
- Occurs when the eye does not focus well on nearby objects.
- Is corrected with a convex or "plus" (+) lens.



35

Refractive Error

A condition in which light rays cannot be brought to a single focus on the retina because of problems with the cornea or lens.

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NEARSIGHTEDNESS

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- Occurs when the eye does not focus well on distant objects.
- Is corrected with a concave or "minus" (-) lens.

36

ASTIGMATISM

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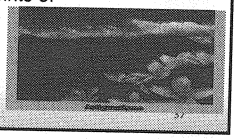
- Occurs when the cornea or lens in the eye curves more in one area of the eye than another.
- Results in a blurred image and poor visual acuity because the reflected image of an object focuses on different points of the retina.
- Is corrected with a cylindrical lens.



37

AMBLYOPIA

- Results when the brain and the eye do not work together properly, causing one eye to "turn off."
- Is the most common cause of vision impairment in children.
- May improve significantly if detected and treated early (at least before age 7). The sooner amblyopia is treated, the better.
- Usually persists into adulthood if not treated in early childhood.

40

OTHER VISION PROBLEMS

STRABISMUS

AMBLYOPIA

38

Signs and Symptoms

Observing for signs and symptoms of vision problems is part of every vision screen. Even if the distance acuity screening test—or any other test for visual function—is passed, **observing signs or symptoms of vision difficulty is reason to refer the child for follow up with his/her primary care provider**.

41

Strabismus

- One or both eyes may turn in, out, up, or down.
- The problem may be constant or intermittent.
- Often presents with the development of amblyopia.

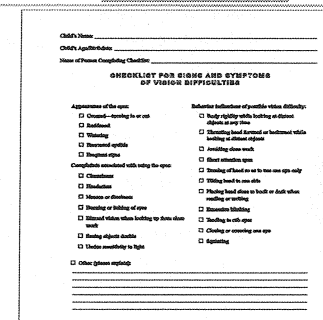
39

Look for these signs of a potential vision problem during a vision screening:

- Crossed eyes.
- Red or watery eyes.
- Squinting.
- Covering one eye or turning head to use one eye.
- Leaning in

42

CHECK LIST (page 59)



CHECKLIST FOR SIGNS AND SYMPTOMS OF VISION DIFFICULTIES

43

Approved Charts

- HOTV Chart
- Sloan Letter Chart

46

QUESTION

What should you do if a child who exhibits signs or symptoms of a vision problem passes his or her screening?

44

HOTV (Crowded Version)

- For children 5 and under.
- For children who do not know the alphabet or have a language, intellectual, or physical limitations.
- Only 10 foot distance chart can be used.

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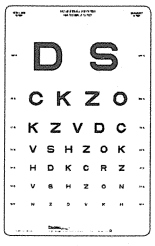
VISION SCREENING CHARTS

45

SLOAN LETTER CHART

- For children age 6 or older.
- For children who can accurately identify alphabet letters.
- 10 or 20 foot distance chart may be used.



48

QUESTION

What is the appropriate chart to use for a 6 year-old who can correctly identify alphabet letters 100 percent of the time?

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HOW TO SET UP YOUR SCREENING

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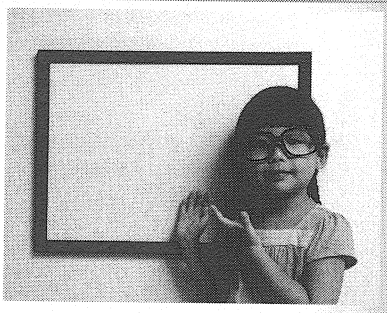
PREPARING THE SCREENING ENVIRONMENT



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STEP 1

Assemble the following supplies:

- Steel measuring tape
- Masking tape
- Footprints
- Occluder(s)
- Plain brown or butcher paper
- Flexible lamps (if needed)
- Pointers
- Screening record forms
- Visual acuity charts
- Cover cards

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Preparing the Screening Environment

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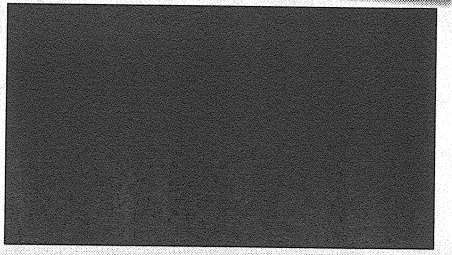

51

STEP 2

- Position the eye chart on the wall so that the 20/30 or 20/40 line, also known as the "passing line," is at the eye level of the average-sized child you will screen.
- Plan to adjust the position of the eye chart so that it is at a comfortable position based on the child's height.

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IMPORTANT!

- The passing line is the line the child must read in order to pass the screening.
- **PASSING LINES**
- 20/40 line—children 4 and younger
- 20/30 line—children 5 and older

55

STEP 4

- Position the assistants (whose roles will be discussed next) at the chart location and at a table facing the child, midway between the child and the chart.
- Depending on the number of assistants you have, you may need to have one person positioned so that he or she can see both the child and the chart.

58

STEP 3

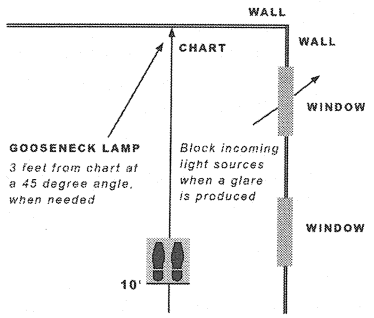
- Measure the distance indicated on the top of the chart (10 or 20 feet).
- Mark that spot with masking tape or footprints.
- Ask the child to place his or her heels on the mark.
- If the child is seated, align the back of the child's head with the mark.

56

QUESTION

How do you know where the child should stand for a screening?

59



57

ROLES OF THE SCREENING TEAM

60

REMEMBER

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Ideally your screening team will consist of three certified screeners. However, one certified screener may train and direct the activities of uncertified screening assistants.

61

IMPORTANT!

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The practice (or beginning) line is one line above the passing line.

- For children 4 and younger this is the 20/50 line.
- For children 5 and older this is the 20/40 line.

62

IMPORTANT!

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To pass a line, the child must **identify one more than half** of the symbols on the line.

The visual acuity score is always the last line that is read correctly (passed).

63

Member 1

- Stands near the child.
- Greets the child and gets his or her name and age.
- Positions the child at appropriate distance from the chart.
- Holds the occluder for each eye during screening.
- Signals to the appropriate team member when it is time to display the next symbol or line on the chart.
- Signals the results of the test to the team member who is doing the recording.

64

Member 2

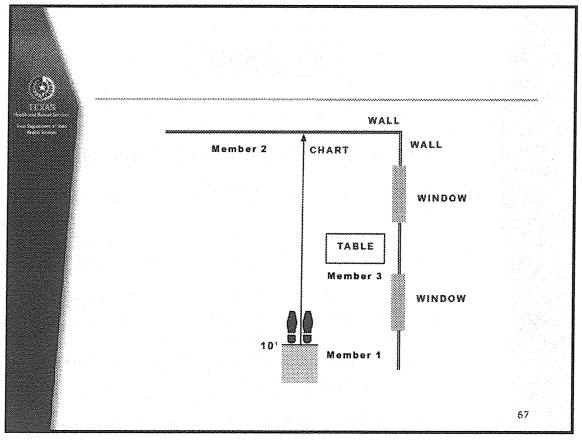
- Stands near the chart (or seated).
- Determines practice and passing lines according to the child's age.
- Uses cover cards as needed.
- Points to the appropriate symbol using a pointer.
- Listens to the screener's signals to determine:
  - What line to display.
  - What symbol to display.
  - When to repeat a line.

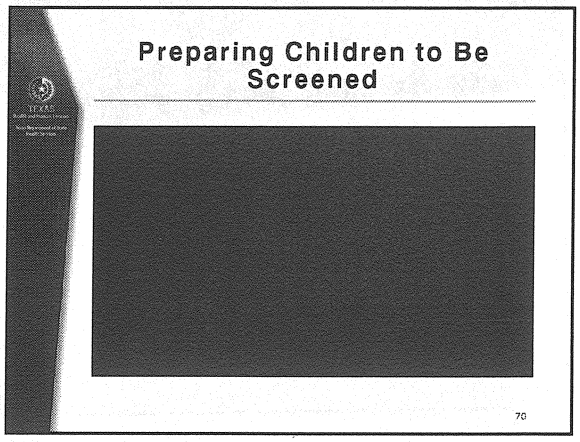
65

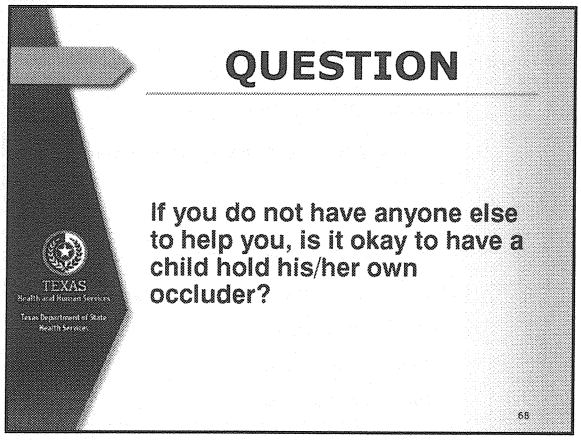
Member 3

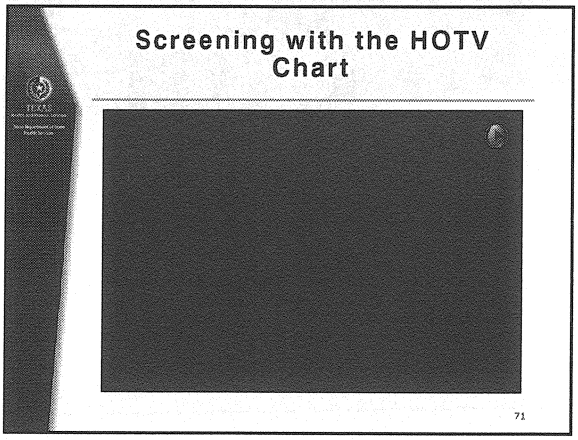
- Is seated at a table facing the child, midway between the chart and the child.
- Records visual acuity of each child on the appropriate form.
- Records signs and symptoms of vision problems and helps the screener observe each child.
- Observes behavior of the child during the screening and makes sure he or she does not peek around the occluder.
- Notes rescreenings and referrals on appropriate forms.

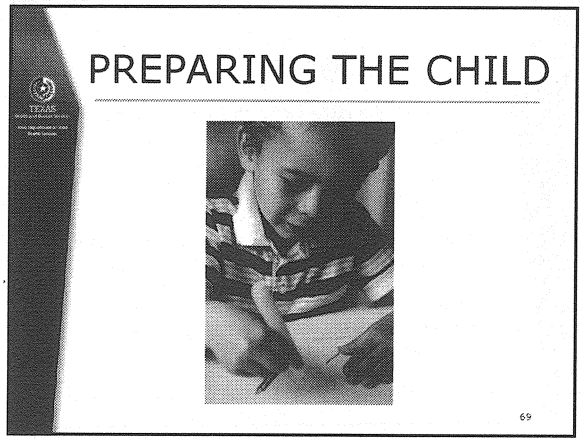
66

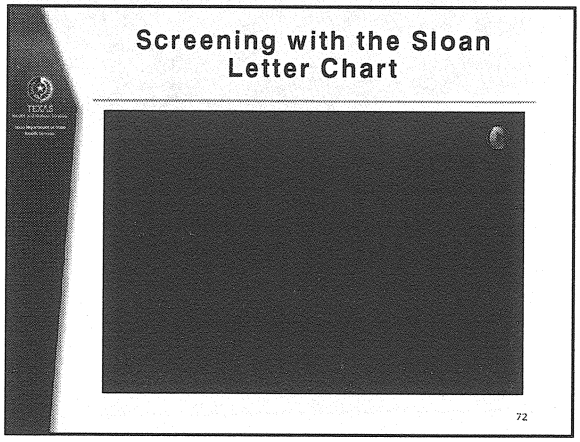

WALL
Member 2
CHART
WALL
WINDOW
TABLE
Member 3
WINDOW
10'
Member 1
67


Preparing Children to Be Screened
70


QUESTION
If you do not have anyone else to help you, is it okay to have a child hold his/her own occluder?
TEXAS
Health and Human Services
Texas Department of State Health Services
68


Screening with the HOTV Chart
71


PREPARING THE CHILD
69


Screening with the Sloan Letter Chart
72

IMPORTANT

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Before being screened with the HOTV chart, the child must be able to match all four symbols.

H O T V

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SCREENING PROCEDURES

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Note:

- If the child cannot be trained using this technique, attempt to retrain and perform a screen as soon as possible. Very young and new students may require a month or two at the facility to become comfortable enough to test.
- If the child still cannot train, refer him/her to a primary care provider.

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Goals of a Distance Acuity Screen:

1. Obtain distance acuity for each eye.
2. Determine whether the child passes or fails the screen.

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QUESTION

For children being screened using the HOTV chart, should you review the training right before the screening takes place, or is this considered cheating?

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NOTE:

Ideally, there will be three team members working together to conduct the screening:

- Member 1—standing next to the child.
- Member 2—standing near the chart.
- Member 3—seated at the recording table.

Remember: At least one of the three has to be a certified screener

78

IMPORTANT:

If the child has been prescribed glasses or contact lenses, he or she must wear them at the time of the screening. Rescreens and referrals are based on acuities with correction

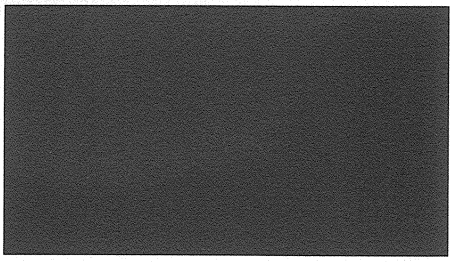
79

QUESTION

How do you know if a child has passed the screening?

82

Screening Procedures



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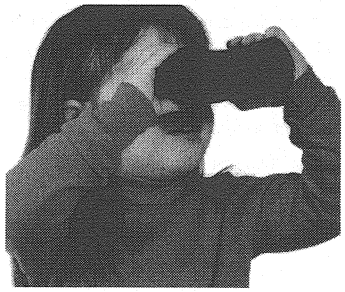
OPTIONAL SCREENINGS



83

REMEMBER

- **Peeking around the occluder results in more children passing the screen who would normally fail. This is possibly the most common screening error.**
- **Be sure the occluder blocks all vision in the eye it covers.**

81

Automated Vision Screening

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- Automated vision screening is an optional method that is especially useful for screening children through age 5.
- Screeners who intend to use automated screening devices should be trained by the manufacturer. This manual does not provide instructions for instrument-based screening.

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Important Facts About Automated Screening

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- An optional alternative to screening with an eye chart.
- Not dependent on behavioral responses of children.
- Appropriate for children through age 5.

Photoscreening uses a special camera to screen for refractive errors and strabismus.

85

Hirschberg Corneal Light Reflex Test

- Appropriate for all age levels beginning at 6 months.
- Enables the screener to detect a constant muscle imbalance or misalignment of the eyes (a type of **strabismus**) by noting the position of light reflected in the pupils.
- Produces the most accurate referrals when screeners check the results against the results of another certified vision screener.

88

Photoscreening

- A type of automated screening device.
- Uses a special-purpose camera to determine how well a child can see.
- An alternative to visual acuity-based screening with an eye chart.
- Cannot determine exactly how well a child's visual acuity is developing.
- Recommended for children with disabilities who do not respond well to other screening methods.

86

Cover and Uncover Test

- Checks for strabismus or muscle imbalance.
- Observes eyes to see whether they shift when alternately covering and uncovering individual eyes.
- Requires the screener to be trained to recognize the kind of eye movement that indicates muscle imbalance.

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Muscle Balance Tests

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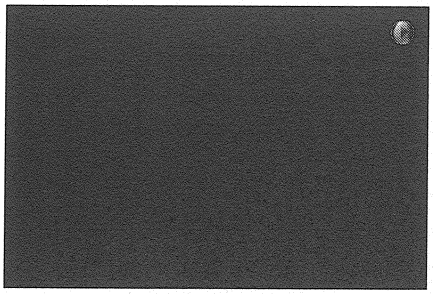
- Determine whether the eyes are aligned correctly so that binocular vision is normal.
- Are optional by law but recommended by DSHS for children in preschool, kindergarten, 1st, and 3rd grades.

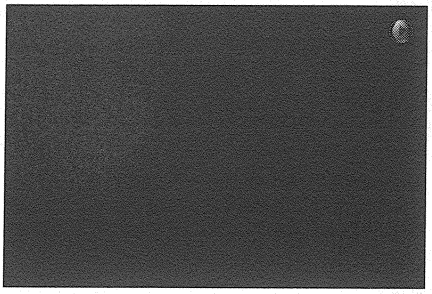
87

2 Optional Muscle Balance Tests



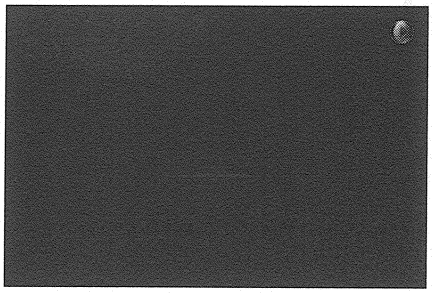
90

Option 1: Hirschberg Corneal Light Reflex Test



91

Option 2: Cover and Uncover Test



92

Stereoacuity Screening

Stereoacuity instruments screen for a variety of different vision problems including:

- **Near point acuity**
- **Far point acuity**
- **Phoria**
- **Fusion**
- **Color perception**
- **Lateral coordination**

93

QUESTION

What do muscle balance tests help identify?

94

RECORDING RESULTS AND MAKING REFERRALS

95

Passing Criteria for Children Age 4 Years and Younger

Have 20/40 acuity or better in each eye.

Have less than a two-line difference in acuities between the two eyes.

e.g., 20/40 in the right eye and 20/20 in the left eye

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Passing Criteria for Children Age 5 Years and Older

20/30 acuity or better in each eye

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Texas Department of State Health Services

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Refer a child if he/she:

1. Fails the second distance acuity screen.

-or-

2. Repeatedly fails either of the muscle balance tests.

-or-

3. Shows signs or symptoms of a vision problem.

-or-

4. Fails any other professionally recognized age-appropriate vision screen.

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Passing Criteria for Photoscreening

Results of photoscreening must be documented as "Pass or Fail."

Pass Fail

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Texas Department of State Health Services

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How to Refer a Child

TEXAS Health and Human Services
Texas Department of State Health Services

- Send a letter of referral to the child's parents.
- This letter should tell the parent how to contact the child's preschool or school and how to report follow-up information to the school.
- Include a copy of the screening results.

101

Rescreen Criteria for Distance Acuity Screen

If the child fails the screening of either or both eyes, and there are no signs and symptoms of a vision problem, rescreen within approximately two to three weeks.

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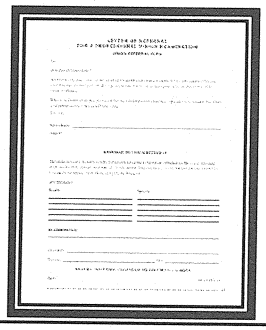
Example Letter of Referral



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Follow-Up

TEXAS Health and Human Services
Texas Department of State Health Services

- It is important for schools to know whether the child has seen his/her primary care provider, and if so, what the findings were.
- Changes in the child's management may include:
  - Preferential seating in the classroom.
  - Encouragement of continuing medical care, if needed.
  - Vision correction.

103

Keep a Record

Track the following information on any child requiring follow-up:

- Acuities from examination.
- Disorder(s).
- Outcome or treatment indicated.
- Educational implications.
- Date of examination.
- Name and address of the primary care provider

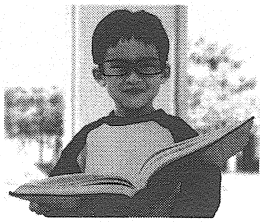
104

QUESTION

When should a screener refer a child to his or her primary care provider?

105

RECORDKEEPING AND REPORTING



106

IMPORTANT

TEXAS Health and Human Services
Texas Department of State Health Services

- Submit annual reports on hearing and vision screening online to DSHS between January 15th and June 30th of each year.
- The information reported is essential to knowing the effectiveness of screening programs.
- Facilities must make the screening records available to DSHS for inspection upon request.

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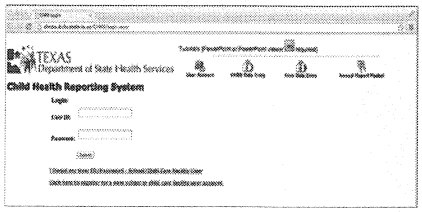
Submit reports online at

- http://chrstx.dshs.state.tx.us



108

IMPORTANT

- **A record of vision screening should be completed and kept by the facility for any child who is required to be screened.**
- **The documentation of a screening must be signed and dated by the individual who conducted the screening.**
- **Facilities must maintain the records of each child's screening for 2 years.**

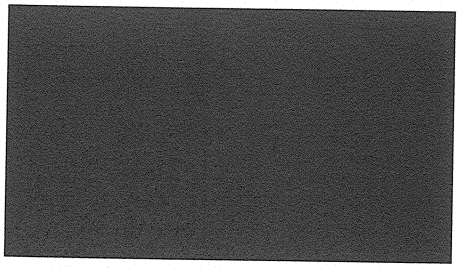
109

Questions?

- For information about entering and completing the Annual Reports online, please call the Vision and Hearing Program at **512-776-7420**.
- Refer to the manual for step-by-step instructions for submitting reports online.

110

Recordkeeping and Reporting



111

The Current Rules

The current rules for DSHS's Vision and Hearing Screening program are included in the Appendix of the Hearing manual and are available online at : **http://dshs.texas.gov/vhs/rules.shtm**

112

QUESTION

Which forms do you need to send to DSHS by June 30th every year?

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Thank you

Raquel Flores MSN, RN
Lonnie Green School Nurse ext 4760

Don't forget EVALS

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10/8/2018 Raquel Flores

TEXAS Health and Human Services

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HEARING SCREENING

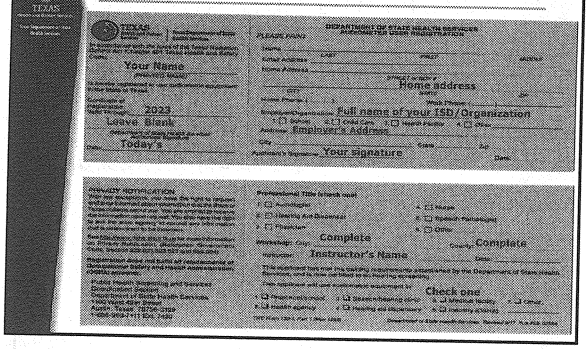
1

INTRODUCTION

Hearing screening is a brief test to determine whether a child's hearing falls within the normal range

4

HEARING REGISTRATION CARD



Why is Hearing Screening Important?

- An estimated 3 million children in the U.S. have hearing loss
- Hearing loss often cannot be detected by simple observation

5

INTRODUCTION

Topics Discussed in This Training

- A brief introduction to the essentials of audiometric screening
- Types of hearing loss
- Audiometry and audiometer terminology
- Specific screening procedures
- Recording and referral procedures
- Online reporting procedure

6

QUICK QUESTION

Have you ever had any personal experience with hearing loss?

7

TEXAS SCREENING REQUIREMENTS

A pure-tone audiometric sweep-check screen must be conducted:

- For each ear
- At less than or equal to 25 decibels (dB)
- For each of these frequencies: 1000, 2000 and 4000 Hertz (Hz)

10

SCREENING SCHEDULE AND REQUIREMENTS

8

RECORDING AND REPORTING REQUIREMENTS

- You may use the M-40 or M-20 forms
- You may use your own form that includes the required documentation
- Submit results online at http://chrstx.dshs.state.tx.us between January 15 and June 30 each year

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SCREENING SCHEDULE AND REQUIREMENTS

Who Must Be Screened	When Screening Must Be Done
4 years old by Sept. 1 Kindergarteners Any other first time entrants (4 years through 12th grade)	Within 120 days of admission
1st, 3rd, 5th, and 7th grades	Any time within the school year (preferably within first semester)

9

DOCUMENTATION

- Child's full name
- Child's date of birth
- Type of screening
- Date of the screen
- Name of screener, printed and signed
- Screening results
- Any signs or symptoms of a hearing problem

12

QUICK QUESTION

Why is it important to screen children at a young age?

13

ESTABLISHING A SCREENING PROGRAM

14

HEARING SCREENING PROGRAM OBJECTIVES

- Identify children who may have hearing loss
- Refer for professional examination
- Follow up on referrals
- Inform teachers about confirmed hearing difficulty

15

HEARING SCREENING PROGRAMS

- Provide a quiet place for screening
- Maintain proper calibration of the audiometer
- Use trained screeners and accepted techniques
- Provide referral and follow-up for children who fail their screening

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QUICK QUESTION

What are some characteristics of a high quality screening program?

17

MEASUREMENT OF SOUND

18

MEASUREMENT OF SOUND

How is hearing measured?

- Screeners use a type of sound called pure tone
- Pure tone has two measurable attributes:
  frequency and intensity

FREQUENCY vs. INTENSITY

- Frequency (pitch) = the number of times a vibration occurs in one second
- Intensity (volume) = loudness/softness of sound

FREQUENCY vs. INTENSITY

Frequency is measured in Hertz (Hz)

- Normal hearing ranges from 20 Hz to 20,000 Hz
- Most speech ranges from 125 Hz to 8000 Hz
- Hearing screening checks frequencies of 1000, 2000, and 4000 Hz

FREQUENCY vs. INTENSITY

Intensity, or volume, is measured in Decibels (dB)

- Normal hearing ranges from 0 dB to 120 dB
- Conversational speech usually ranges from 40 to 65 dB
- Hearing screens test at 25 dB or less

HEARING LOSS

- Permanent hearing loss can occur after a single incident of extremely loud noise levels

  OR

- Repeated exposure to loud noise over an extended period of time
- When exposed to harmful noise longer than the Occupational Safety & Health Administration safety limit chart indicates, it is best to wear ear protection (see page 14)

HEARING LOSS

Because hearing loss develops gradually and without pain or symptoms, you may not notice that you have it until it is severe.

HEARING LOSS PREVENTION TIPS

- Use hearing protectors
- Control the volume when you can
- Never put an object into your ear to remove ear wax

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THE EAR AND THE HEARING PROCESS

How does it work?

- Sound waves, traveling out and away from their source, are received by the ear and transmitted as a message to the brain
- Every day our brain receives hundreds or thousands of signals known as sound

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QUICK QUESTION

What are the two physical attributes used to define a pure tone?

26

THE EAR AND THE HEARING PROCESS

To get to the brain, sound must travel through three well-defined sections of the ear:

The outer ear
The middle ear
The inner ear

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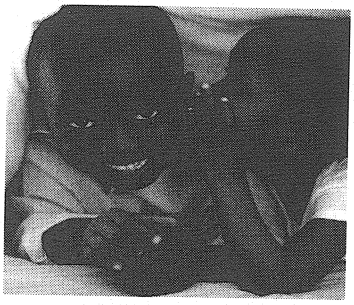
THE EAR AND THE HEARING PROCESS



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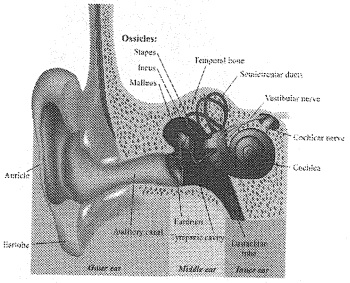
ANATOMY OF THE EAR



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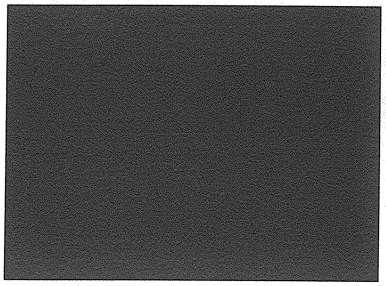
The Ear and The Hearing Process



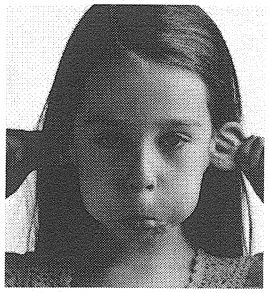
31

OUICK QUESTION

In order for our brain to perceive sound, through what three sections of the ear do sound waves have to travel?

32

TYPES OF HEARING LOSS



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TYPES OF HEARING LOSS

1. Conductive
2. Sensorineural
3. Mixed

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CONDUCTIVE HEARING LOSS

- Occurs when the external or middle ear prevents sound from properly reaching the middle ear
- Results in weakened or muffled sound
- Can be caused by ear wax, otitis media (infection of the middle ear), and ruptured eardrum

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CONDUCTIVE HEARING LOSS

Otitis Media is an inflammation or infection of the middle ear.

This is the single most common cause of hearing loss in school children.

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SENSORINEURAL HEARING LOSS

- Results from impaired function of inner ear and/or nerve pathways of the auditory system
- Makes speech perception more difficult
- Can be caused by factors existing at birth, severe viral infections, and acoustic trauma

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MIXED HEARING LOSS

- Results from a combination of conductive and sensorineural causes
- Causes impaired functionality of both the outer/middle and inner ear

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HEARING LOSS

Hearing loss can be **congenital** or **acquired**

- Congenital: present at birth
- Acquired: developing during a person's lifetime

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CAUSES OF HEARING LOSS

Acquired hearing loss causes include:

- Frequent ear infections
- Viral/bacterial infections like meningitis
- Exposure to loud noise
- Head injury
- Ototoxic drugs

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CAUSES OF HEARING LOSS

Congenital hearing loss causes include:

- Viral, bacterial, or parasitic infections during pregnancy or at birth
- Lack of oxygen before or at birth
- Prematurity and/or low birth weight
- Inherited hearing loss

41

QUICK QUESTION

What is the single most common cause of hearing loss in school children?

42

SYMPTOMS OF HEARING LOSS

43

SYMPTOMS OF HEARING LOSS

Hearing Development

- The first 5 years of life are formative in all areas of development
- Children must have normal hearing in order to develop strong speech and language skills

44

SYMPTOMS OF HEARING LOSS

- Pain in ear(s)
- Discharge from ear(s)
- Ringing or buzzing in ears
- Inability to hear certain tones
- Straining to hear conversation
- Dizziness with no apparent cause
- Favoring one ear
- Lack of response to nearby sounds
- Problems understanding speech over background noise

45

UNFAIR HEARING TEST

For an example of what hearing loss sounds like, click to listen to the Unfair Hearing Test from the Sight & Hearing Association.

46

QUICK QUESTION

What should you do if you notice a child has symptoms of hearing loss?

47

AUDIOMETERS

48

AUDIOMETERS

- A pure-tone audiometer generates pure tones as signals to test hearing
- For screening, use an audiometer with the required frequencies and a method for precisely controlling the intensity of the tones

49

AUDIOMETERS

- **Hearing Level (HL) for pure tone:** the minimum hearing level at which an individual is able to respond 100 percent of the time to a series of tone presentations
- **Attenuator:** a control capable of decreasing the amplitude of an audiometer's output signal without distorting its frequency

50

CARE AND MAINTENANCE

Because of their expense and to maintain reliability of test results, screeners must handle audiometers and earphones with care

51

EARPHONES

- Earphones are the most delicate part of the audiometer
- Earphones transmit test tones to each ear individually according to the standardized color codes: Red for the right ear and Blue for the left ear
- Earphones are calibrated to a specific audiometer and considered an integral part of that particular instrument

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CALIBRATION REQUIREMENTS

- Audiometers require maintenance to ensure accuracy
- Two types of calibration are required:
  1. Monthly biological calibration
  2. Annual electronic calibration

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MONTHLY BIOLOGICAL CALIBRATION

- Required each month the audiometer is used
- Record results on the Monthly Biological Calibration Check form found in the Appendix of the Hearing Manual
- Keep results with the audiometer
- Monthly Biological Calibration Check procedure is on page 25 of the Hearing Manual

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AUDIOMETER MONTHLY BIOLOGICAL CALIBRATION CHECK

Mfg. Maico Model Serial # 07 Owner: X-ISD

Date of last calibration: Assigned to: Nurse X

HEARING SCREENING REFERENCE DATA (Obtain after calibration)

Names of three individuals	Ear	6 kHz	4 kHz	3 kHz	2 kHz	1 kHz	500 Hz	Date
YOU	R	45	15	10	05	00	00	1-1-15
	L	20	00	00	00	00	00	
Person 2	R	60	40	10	00	00	00	
	L	80	60	20	00	00	00	
Person 3	R	45	25	00	00	00	00	
	L	65	50	15	00	00	00	

RECORD MONTHLY RESULTS ON ONE OF THE ABOVE

YOU	R	45	15	10	05	00	00	2-1-15
	L	20	00	00	00	00	00	

NO FURTHER TESTING

	R							
	L							
YOU	R	45	15	10	05	00	00	3-1-15
	L	20	00	00	00	00	00	
Person 2	R	60	40	10	00	00	00	
	L	80	60	20	00	00	00	

SEND FOR ELECTRONIC CALIBRATION

	R							
	L							
	R							
	L							
	R							
	L							
	R							
	L							
	R							
	L							

55

CONDUCTING A SCREENING

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ANNUAL ELECTRONIC CALIBRATION

- Electronic calibration to ANSI standards is required annually
- Must use an independent firm that is registered with DSHS
- See the process on page 26 of the Hearing Manual

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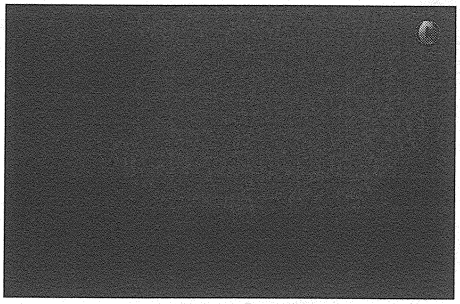
Preparing the Screening Environment



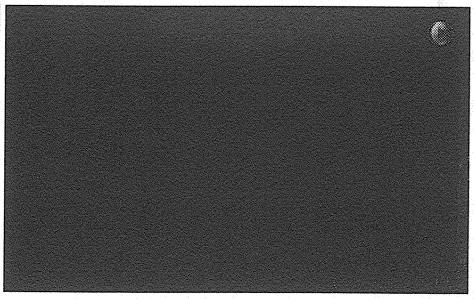
59

QUICK QUESTION

What are some important things to remember about audiometer earphones?

57

Preparing the Child for a Hearing Screening



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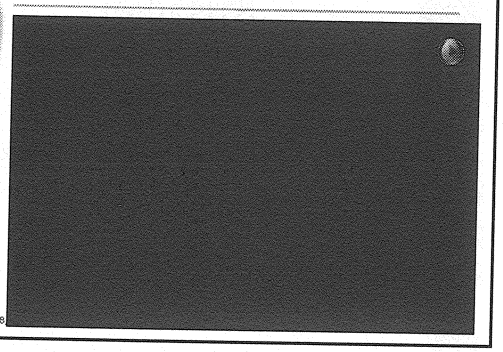
Hearing Screening Procedure



10/8

QUICK QUESTION

How do you know if a child has failed a sweep-check screen?

What should you do if a child fails the screen?

62

RECORDING AND REPORTING PROCEDURES

63

RECORD RESULTS ACCURATELY

- The M-40 and M-20 forms, found in the Appendix, can be used to document results

  M-40 is for an individual's records

  M-20 is for group records

64

RECORD RESULTS OF THE SCREENING

- Keep record of hearing screenings for at least two years
- Use the M-40 or your own form that includes the same information
- The screening record must be signed and dated by the person who conducted the screening

65

REFER FOR EVALUATION

- A child fails a sweep-check screen by failing to respond to any of the three frequencies in either ear
- If a child fails the initial screening, conduct another screening within three to four weeks
- On the second screen, failure to respond to any frequency in either ear requires a referral or an extended recheck

66

LETTER OF REFERRAL
FOR A PROFESSIONAL HEARING EXAMINATION
HEARING REFERRAL FORM

Date: _____

Dear Parent(s)/Guardian(s):

After reviewing your child's hearing screening results/observational comments there is an indication that your child may have difficulty hearing. We urge you to have him/her as an appropriately licensed professional for further evaluation.

When your child is evaluated, please ask that the following information be completed and returned to the school. Your prompt response will benefit your child.

Sincerely, School Nurse: _____

Address: _____

RESPONSE TO HEARING REFERRAL

This child has been referred to you for further evaluation and/or treatment. Established are the hearing screening results and/or observational comments that indicate the child may have hearing impairment that could affect his/her educational advancement. Please complete the following:

Case Assessment: _____

Results:	Specify:
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Recommendation:

_____

_____

_____

_____

Comments:

_____

Signature: _____ Title: _____

RETURN COMPLETED REFERRAL TO THE CHILD'S SCHOOL

(M-400)

67

REFERRAL

Refer all children who fail two sweep-check screens to their primary care provider for evaluation

70

IMPORTANT

If physical signs of hearing problems are observed at the time a child fails the first sweep-check screen, refer for further evaluation at that time rather than wait for a rescreening.

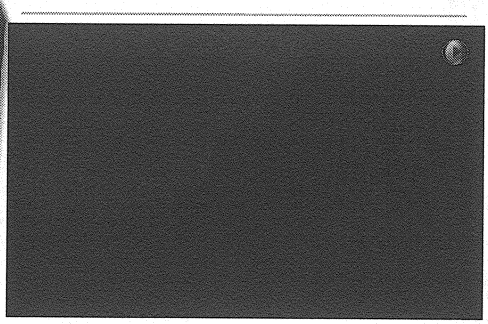
68

QUICK QUESTION

What should you do if a child passes the extended recheck?

71

Extended Recheck Procedure



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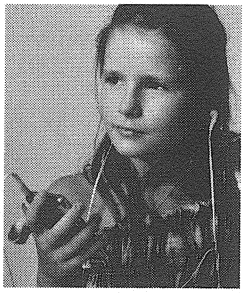
RECORDKEEPING AND REPORTING



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RECORDKEEPING AND REPORTING

- All facilities must submit annual reporting of Vision, Hearing and Spinal Screening results online at http://chrstx.dshs.state.tx.us
- The time period for entering data is January 15 through June 30
- Each facility is assigned a Facility ID and FIN Code to log into the website
- For information or questions about reporting, call the Vision and Hearing Program at DSHS at 512-776-7420

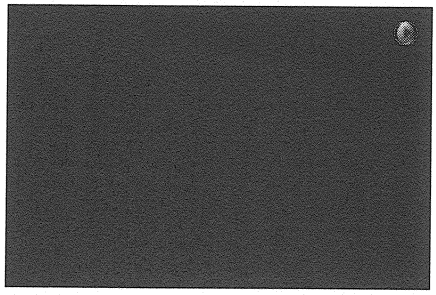
73

QUICK QUESTION

What is the deadline for submitting hearing screening results to DSHS?

76

Reporting Results



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TEXAS Health and Human Services

Texas Department of State Health Services

Thank you

Your contact information here

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THE CURRENT RULES

Rules for the DSHS Vision and Hearing Screening Program are included in the Appendix of this manual and are available at:

http://dshs.texas.gov/vhs/rules.shtm

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