Spinal Screening Program

SPINAL SCREENING PROGRAM GUIDELINES
Texas Department of Health
Bureau of Children’s Health
Child Wellness Division

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In collaboration with:
Texas Department of Health
Spinal Screening Program
&
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Introduction

School spinal screening was developed to identify adolescents with small spinal curves and refer them for treatment before these curves become too severe. All states do some form of spinal screening to assure students needing evaluation and / or treatment get early attention. The state of Texas mandates spinal screening for students in the 6th and 9th grade using school nurses and other trained adults to screen all students. Careful training and understanding of spinal screening is essential for the success of this program. Schools may implement a program that includes screening in the 5th and 8th grades as an alternative to 6th and 9th. The intent of the state law is to maintain a three year gap between students’ spinal screenings.

A special thanks is extended to the Scoliosis Research Society for their permission to reprint the graphics displayed in this manual.
February 20, 2001

RE: Spinal Screening

Dear Spinal Screener:

The surgical treatment for severe spinal deformities has been extremely successful. Continuing advances has made the procedures easier for the patients and their families and the results more impressive. Many of these surgeries are avoidable with effective school screening and bracing programs.

The majority of the severe spinal deformities occur in children with adolescent idiopathic scoliosis. All of these children had little or no deformity in their preadolescent years. The goal of school screening for scoliosis has not changed over the 30 years of its existence, "the identification of small progressive curvatures of the spine". All of the large devastating adolescent idiopathic curves were once small curves, the majority of which are readily braceable. Successful school screening programs and bracing programs result in a decreasing incidence of spinal deformity surgery for adolescent idiopathic scoliosis. Despite the challenges to its efficacy, school spinal screening remains the standard for decreasing the incidence of spine surgery of spinal deformity for idiopathic scoliosis. The role of the screener in preventing these surgeries is paramount.

My personal enthusiasm for school screening for scoliosis has remained unchanged over the last 30 years.

Richard J. Haynes, M.D.
Chief of Staff

RJH/sgb
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THE NORMAL SPINE

The spinal column is made up of 33 vertebrae or bony segments. These are aligned vertically on top of one another and supported by muscles and ligaments (Figure 1). Discs between each vertebrae serve as pads. The purpose of the spinal column is to provide stability, add mobility to the torso, and to protect the delicate nerves of the spinal cord.

The spine is divided into four main areas: the cervical area (neck), the thoracic area (chest), the lumber area (small of the back), and the sacral area (lower portion of the spine). When viewing the back directly from behind the spine is straight, the shoulders even, hips are level and the distance between the arms and the body are equal. (Figure 2)

When viewing the spine from the side, the natural curves of the shoulder and lower back can be seen. The shoulder blades protrude the same amount on each side creating a symmetric appearance on each side of the spine.
ABNORMAL SPINAL CURVATURE

Spinal screening is designed to detect 2 major types of spinal deformities, scoliosis and kyphosis.

Scoliosis is defined as an abnormal lateral curvature of the spine of 10° or more. This rotation in the spinal column creates a side to side, “S” shaped curve when viewed from behind. Some cases worsen with time and can result in serious problems such as unsightly appearance, occasionally back pain as one ages, and in the worst cases, interference with heart and lung function. Scoliosis is further divided into two categories: structural and functional.

Structural: These curves are the result of changes in the alignment in the vertebrae that are fixed. Structural curves can be distinguished from functional curves by their associated spinal twisting. This twisting results in the hump on one side of the rib cage seen when the student bends forward. Unlike poor posture, these curves cannot be corrected by learning to stand up straight.
**Functional:** In this type of scoliosis there are no permanent changes in the shape or structure of the spine. Functional scoliosis develops secondary to another abnormality, usually in the hip or lower extremity. The most common cause is a difference in the length of the student’s legs that makes the child stand unevenly. Uneven leg length can be identified by having the student stand with one foot on a block of wood. With the hips then at the same level, the spine appears straight. Other causes are muscle spasms, pain, or poor posture.

**Incidence of Scoliosis** Eighty-five percent of all cases of structural scoliosis have no known cause and are referred to as idiopathic scoliosis. Idiopathic scoliosis occurs in two to three percent of the adolescent population. It commonly affects young people between the ages of 10 -16 years of age. Gender does make a difference in the time of onset because girls begin their adolescent growth spurt and reach skeletal maturity earlier than boys. This accelerated spinal growth generally occurs from the ages of 10 – 14 for girls and 12 – 16 for boys. The incidence of idiopathic scoliosis occurs equally in boys and girls in early adolescence, but progression, or worsening, of the curve is more common in girls than boys. Another factor that can contribute to the incidence of scoliosis in a student is a positive family history of scoliosis, suggesting a genetic predisposition.

In contrast to idiopathic scoliosis, there are several less common types of scoliosis that have a known cause. These curves may be present at birth or related to muscle disorders and are not the focus of school screening because they occur earlier in life.
For idiopathic scoliosis, the earlier in the growth spurt that a curve is identified, the greater the risk that the curve will worsen. For example, the immature, premenstrual girl has a higher risk of progression than an adolescent female who has already begun menses, or an adolescent boy who has developed signs of maturation such as axillary hair.

Idiopathic scoliosis can go unnoticed in a young person because it is rarely painful in the formative years. Signs to watch for are:

- One shoulder higher than the other
- One shoulder blade higher or more prominent than the other.
- One hip higher that the other
- The space between the arms and the body is greater on one side than on the other
- Leaning to one side
- The head is not centered directly above the pelvis.

**Kyphosis**, or roundback is described as an excessive curvature of the thoracic spine when viewed from the side. This deformity can be corrected with exercises and proper posture if it is not fixed. A small percentage of young people have a fixed, structural type of curve called Scheuermann’s kyphosis where the vertebrae are actually wedged. The cause for this type of deformity is unknown. Bracing or surgery may be recommended for the immature adolescent with Scheuermann’s kyphosis. In relationship to
scoliosis, a fixed kyphosis is a much rarer finding in teenagers, but will occasionally be identified in spinal screening.

**SCREENING PROCESS**

Early detection is the key to controlling spinal deformities. The purpose of school screening is to detect scoliosis and kyphosis at an early stage when the curve is mild and may even go unnoticed. Most curves can be treated without surgery if they are detected before they become too severe. The screening process identifies students that have some physical findings that suggest a spinal curve. It does not diagnose a spinal deformity. The student showing these findings is referred to a physician who completes an extensive examination and takes a x-ray to confirm whether or not the person has an abnormal spinal curve. At that point the physician can provide recommendations for treatment. The goal of the screening process is to detect a student who needs to be referred at the earliest point, before an abnormal curve gets worse.


**Procedure**

1. The examiner may sit or stand with a mark on the floor indicating where the student is to stand.

2. The student must stand erect with feet together, knees straight, and arms hanging loosely at the sides first while facing the examiner.
   - ♦ It is important for the student to face forward throughout the exam positions. Turning the head can cause a change in the findings.
   - ♦ Long hair should be forward when evaluating the back.

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**PLEASE NOTE:** Students do not undress to this degree for the screening process. These illustrations are for educational purposes only.

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3. With the student facing **front** the examiner checks for the following:
   - ♦ One shoulder higher than the other
   - ♦ Larger space from arm to the side of the body (compare both sides)
   - ♦ Uneven waist creases
   - ♦ Uneven hips levels

4. The next position is called the Adams forward bending test. Ask the student to stand erect with feet together and knees straight. With the palms of both hands touching, the student bends forward until the back is horizontal. Examine the student in this position to check for:
   - ♦ Uneven contours, humps on one side
   - ♦ Any curve in the spine
5. View the student from the **side** both in the standing and forward bend position to check for:

- Exaggerated roundness in upper back
- Exaggerated arch in lower back
- Uneven contours, humps on one side
- Flexibility - can the student bend forward and touch the upper shin or feet

6. Finally, view the student from the **back**, both standing and bending forward, and note any of the following:

- One shoulder higher than the other
- One shoulder blade wing is higher or stands out more than other
- Curved spine
- Larger space from arm to the side of the body (compare both sides)
- Head is not centered directly above crease in buttocks
- Uneven waist creases
- Uneven hips levels

From the back bending position look for:
- Uneven contours, humps on one side
- Any curve in the spine

**Students with any positive findings should be re-screened prior to referral.**
**Scoliometer (optional):**

When some physical findings are present suggesting a spinal deformity, rescreening is necessary to identify which students need to be referred to a physician. The scoliometer is a brand of inclinometer. It is similar to a carpenter’s level and designed to measure the degree of spinal rotation. This is particularly helpful when a student has some positive physical findings from the Adams forward bending test. The purpose is to measure the degree of rotation to identify if the student needs to be referred to a physician for evaluation.

As with any tool, correct use is important to ensure the results are accurate and consistent. To use the scoliometer:

- Place the scoliometer gently across the back at the point where a hump or unevenness is most prominent. (Figure 6)
- The number 0 should be directly over the top ridge of the spine.
- Do not press down on the device as it can distort the reading.
- Referral is recommended for students with a reading of $7^0$ or more
- Students with a reading of $5^0$ to $7^0$ should be re-screened in six months to one year to see if the curve is increasing.
REFERRAL PROCESS

School screening was developed to identify adolescents with small spinal curves, and refer them for treatment before the curves become severe. Although the majority of patients with idiopathic scoliosis do not require more than observation, some will need brace therapy or even surgery. While school screeners can identify physical findings that may suggest spinal curves, they cannot diagnose the reason for the finding or its significance. This must be done by a physician.

The screening process is sensitive enough that some students will be referred that either do not have a spinal problem or do not require treatment beyond observation. The screener must be careful in communicating with the student and family when a problem is suspected until a final diagnosis is made. If there are concerns about a student’s screening results, the screener is encouraged to work with another professional adult to review the findings. Novice screeners are encouraged to work with an experienced screener to gain expertise. A scoliometer may be particularly helpful for re-screening to measure the spinal curve and decide on the need for referral. All students with positive findings are to be re-screened prior to referral.

Documentation of the spinal screening program includes: initial screening, re-screening, referrals made, referral results and planned follow-up. See Spinal Screening Worksheet in Appendix A.
Referral: What the student can expect at a medical examination

A student meeting certain criteria on spinal screening and confirmed on re-screening will be referred to a physician to evaluate whether or not there is truly a spinal deformity. A complete history and physical examination involves re-evaluating the findings noted at the screening. An x-ray may be taken to allow the physician to see and measure any abnormal curvature of the spine. The most common measurement used is the Cobb method, which identifies the degree of curvature. The skeletal maturity of the young person can also be estimated by evaluating the Risser sign on the x-ray. This is a small ridge of bone that forms over the top of each side of the pelvis. The more complete the Risser sign, the more mature the skeleton and the less risk for any future growth that could increase the curve. Another way the physician may estimate bone/skeletal maturity is a hand x-ray. This works because bones in the hand mature at different times during the child’s growth spurt. The amount of curvature in degrees and the maturity of the skeleton at the time of discovery will determine the treatment selection.

MANAGEMENT OPTIONS for spinal deformities consist of the three “O”s:

**Observation**

Routine re-screening or observation by the physician is a form of treatment for mild curves. Once the school program refers a student to the physician for a positive finding, the physician may need to follow the adolescent and monitor for any increase in the curve. From the amount of curve and the growth pattern of the child, the physician will decide if and when to add any further treatment. This observation period consists of re-screening regularly throughout the rapid growth years of adolescence until the spine is mature. It is important to note that more than 90% of students with scoliosis require no treatment in addition to observation.
Orthosis (brace)

Studies show that bracing can prevent the progression of a spinal curve in a growing adolescent (Rowe 1997, Lonstein 1994). This makes it important for students that have mild curves that are progressing to be identified. For a student with scoliosis, preventing the curve from progressing can prevent the need for spinal surgery (Rowe). While the orthosis can prevent worsening of a spinal curve, it cannot undo what curve already exists.

Bracing is generally recommended for curves of $25^0$ to $40^0$ and for progression of existing curves in adolescents with growth remaining. Use of an orthosis, often called a spinal brace, can prevent progression of the curve. The orthosis supports and puts pressure on the spine to prevent more curvature from forming during active spinal growth. The main factor in achieving a higher rate of success is how many hours in the day the brace is worn. A wearing schedule of 16 hours a day has a success rate of 60% where a wearing schedule of 23 hours a day has a success rate in the 90% range (Rowe). This is a good reason to encourage students to wear their orthoses as prescribed by their doctor.

Various spinal orthoses are available. The TLSO orthosis is named by the areas it is designed to stabilize, the thoracic lumbar and sacral part of the spine. It is more cosmetically acceptable than the older Milwaukee brace because it can be covered well by clothing (Figure 7).
In some cases the curve is high in the spine and will require a Milwaukee brace for correction (Figure 8). Wearing a brace is not an easy treatment for a teenager. Even covered by clothing, it’s hot, hard and can make the student feel self-conscious. Getting into a daily routine of wearing the brace and participating in activities the student enjoys helps with compliance which is the key to successful treatment. Even though bracing can be difficult for an adolescent to adjust to, studies have found this to be short term for the teen with a supportive environment.

**Operation: Spinal Fusion and Instrumentation**

For those students with a worsening spinal deformity, surgery can reduce a portion of the curve and prevent it from increasing in the future. Usually surgery is reserved for teens and pre-teens that already have a curve of 45° or more. The most common surgical procedure is a posterior spinal fusion with instrumentation and bone graft. This type of surgery involves attaching rods to the spinal column to help straighten it. The bone graft between the affected vertebrae encourages fusion, or joining, of the bone to prevent further progression of the curve. Instrumentation refers to the various rods, hooks, wires and screws which are use to hold the spine in the corrected position as possible while the bone fusion heals. The instrumentation is rarely removed.
Following the surgery, the fused section is no longer flexible. This does not seem to cause a problem unless there is a great number of vertebrae that need to be fused. The average hospital stay is about 5 to 7 days, and the student can usually return to school in 2 to 6 weeks. During the first year after surgery, there will be some limitation on strenuous physical activity. After this healing phase, the surgeon will usually release the student for all activities, including some competitive, low contact sports. Sometimes the physician feels it is necessary to exempt the child from competitive contact sports and gymnastics.

**Alternate Treatments**

Other treatments have been tried for spinal deformities and not been found to be successful in preventing the curve from progressing. Included in this list are electrical muscle stimulation, exercise programs, manipulation, massage, and magnets. These treatments may not be harmful in and of themselves. The concern is that the use of, or belief in, these treatments prevents the family from seeking proven treatment. This delay in medical treatment may cause the adolescent with a progressing curve to get worse and need surgery instead of bracing.
Spinal Screening Programs Throughout the United States

All 50 states perform some school screening. In Texas, spinal screening is mandated by the state law. Nationwide, 22 states require the schools to provide screening, and the remaining states provide screening through voluntary programs (Figure 10). There is some variation in the grade levels and frequency of screenings, but all target the time when adolescents are beginning their rapid growth phase.

The school system provides a place where all students can be examined and the results tracked. Since spinal changes generally do not cause pain, mild curves may not be noticed by parents or cause a visit to the family doctor. Also, as the student matures and becomes more modest, the parent may have few opportunities to view a student’s back to notice a change. Without school screening, referral and treatment, mild curves may progress into severe scoliosis or kyphosis. These conditions may require major surgery and the results are often less favorable than if the condition had been detected and treated earlier.

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Fig. 10
Cost Effectiveness of Spinal Screening
Recent studies have validated the effectiveness of non-surgical treatment in the adolescent with a spinal curve that is progressing. Early detection and initiation of treatment can prevent the need for spinal surgery at a cost of tens of thousands of dollars. Early treatment also prevents the discomfort, need for physical rehabilitation, and interruption in schedule related to a major surgery. Due to surgery, the student could miss from 6 to 8 weeks of school and require homebound instruction during the recovery time.

Frequency of Screening
Ideally, screening should be done annually during the growth of adolescence, ages 10 – 14 (Grades 5 through 9), to detect spinal concerns early. The Texas Legislature has mandated all children in grades 6 and 9 attending public and private schools shall be screened for abnormal spinal curvature before the end of the school year (Appendix A, Page 45). The screening requirement for children entering the 6th or 9th grade may be met if the child has been screened for spinal deformities during the previous year. Schools may implement a program that includes screening in the 5th and 8th grades as an alternate. The intent of the state law is to maintain a three year gap between students' spinal screenings.

Students that are new to the district, and who are entering between 6th and 9th (or 5th and 8th for districts screening those grades) must be screened within 120 days of enrollment, unless they have a record of screening from their previous school and/or district. Additionally, it is recommended that students entering the district who are past the grades of the screening requirement, but who, according to records, have never been screened, be included in the annual spinal screening, or be screened individually.
In addition, the program allows for screeners to re-check students they consider to be at risk for developing an abnormal curve.  A previous questionable sign of curve in a prior year with evidence of rapid growth would be one criteria for re-screening the student at a later date. In males, rapid growth may continue to the age of 16, which the screener may need to take into consideration for follow-up.

**Who May Screen**

Health aides, licensed vocational nurses, physical education teachers, classroom teachers, and volunteers may screen if they participate in a workshop conducted by a Texas Department of Health approved instructor and have become certified according to the Spinal Screening Program Guidelines.

Licensed professional health practitioners such as registered nurses, physicians, chiropractors and physical therapists may screen if their course of study included screening for abnormal spinal curvature or if they received formal advanced instruction as part of their continuing education or the above workshop.

With an assistant, an experienced screener should be able to screen 20-30 students per hour. Below is a brief checklist to prepare for spinal screening. Review the General Organization for Spinal Screening Activities on the following pages for a detailed outline for the screening process and documentation.

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<td>Remind students of screening and what to wear for screening day</td>
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General Organization for Screening

The person responsible for the screening program will have to coordinate activities with the school principal, teachers, parents, physicians and nurses.

Preparation for Screening

★ Students will be screened individually in an environment offering privacy. If possible, locate a private area where students can remove shirt or change clothing. (A room adjacent to the physical education dressing room might be the most convenient.)

★ You may choose to have 2 or more adults participate in the screening process for security/liability concerns. Assistants can help with student preparation and management.

★ Conduct orientation sessions for each class of students to be screened. The TDH Audiovisual Library lends educational videos for children that explain the importance of spinal screening and allay any fears they may have (see Appendix C, Page 53 for titles and ordering information).

★ Determine the amount of time needed to conduct the screenings and develop a schedule. If necessary, coordinate this schedule with the teachers who will need to release their students from class on those days.

★ Send out pre-screening letter to parents (see sample letter in Appendix A).

★ Have a roster of students you have scheduled to screen. Use the Spinal Screening Worksheet (see Appendix A) or a similar form to check off students screened and indicate your findings.

★ Only children whose parents have submitted an affidavit of exemption may be excused from screening. Appropriate personnel should be notified privately concerning these children.

★ If a parent chooses to have the screening done by their family doctor, verification from the doctor must be submitted.

★ On the day before the scheduled screening, remind the students of the purpose of spinal screening. Instruct boys to wear gym shorts or swim trunks and girls to wear two-piece swimsuits or shorts and a halter top. Speak positively, and refer to this activity as “spinal screening,” rather than “screening for scoliosis and kyphosis”.

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Screening

★ The screener may use a chair. There should also be a table nearby for use in recording information. The screener should be five to eight feet from the student he/she is screening. Place a strip of tape on the floor to mark the place the student is to stand. Good lighting will facilitate the screening.

★ Check students with no shirts on – Girls are examined with halter top, swim top or bra on.

★ In order to save time, have some students waiting while you screen others. An aide or volunteer may assist in maintaining the flow of students.

★ Record the name of each student in the class on the Spinal Screening Worksheet or use the classroom roster.

★ Record all positive findings next to the students name on the Spinal Screening Worksheet. If some students DO NOT get screened, note the reason next to his/her name.

★ Arrange to re-screen students with positive or abnormal findings within two weeks, and screen those who missed the original screening sessions.

Use of the scoliometer (optional) to re-screen will assist in determining which children need referral. Refer those whose spinal curve on the scoliometer is 7 degrees or more. If possible, ask another certified screener to do the re-screening with you.
Establishment of a School Screening Program

(Refer to flow chart in Appendix C, page 52)

★ Coordinate with school administration.

★ Verify screeners are state-certified. Arrange for those staff conducting the screening to attend a state-approved screener certification workshop if they are not currently certified.

★ Conduct an in-service educational program for school system resource personnel/administrators, pupil personnel, school physician, nurses, physical educators, parents and student representatives.

– Discuss the legal requirements for spinal screening, scope of the problem, rationale and technique of screening.

– Discuss grades to be screened and methodology for screening, with follow-up of positive cases and referral to a health care provider or clinic. Although the law requires screening before the end of grades 6 and 9, exact ages and patterns of screening will vary dependent upon grade structure of schools, school nurse and physician availability. Some schools may choose to screen all children in grades 5 - 9 (ages 10 -14).

★ Determine screening date and site.

★ Obtain necessary forms.

★ Publicize screening program via local medical meetings, media, PTA, student groups, parent letter (See Appendix A for samples).

★ Arrange and perform screening.

★ Complete follow-up activities.
FOLLOW-UP ACTIVITIES

Absentees
Schedule students who were not screened because of absence to be screened at another time. This should be done within two weeks after the missed screening.

Exclusions
If a student was excluded from screening for any other reason, have his/her reason documented.

Positive Findings
While you are screening the absentees, use this session also for re-screening of all students with positive findings of scoliosis or kyphosis. The original worksheet may be used at the re-screening. If initial positive findings are not confirmed, the parents need not be contacted. If a positive finding is confirmed by the person who re-screens, the parent, guardian or managing conservator should be contacted as specified in contacting the parent/guardian below.

Contacting the Parent/Guardian
As a courtesy, telephone the parent to explain that a professional evaluation is recommended as a precaution. Give reassurance that many findings are of no consequence, but professional observation may be necessary to determine that the signs are not getting worse. Inform the parent that he/she will receive written notification of the screening findings.

Financial Assistance
Certain families may be eligible for care under the Texas Department of Health (TDH) Children With Special Health Care Needs (CSHCN) Program. Families must meet eligibility requirements pertaining to medical condition, income, residency and age as set forth in CSHCN rules and regulations. If eligible, the parents will need to select a doctor from the list of CSHCN approved providers. CSHCN will reimburse the doctor for ruling out the diagnosis and treatment of scoliosis or kyphosis. Authorization must
be obtained prior to service delivery. The family must complete the CSHCN application. The physician must complete the Physician Assessment Form. The forms and list of approved providers may be obtained by calling the CSHCN help line at 1-800-252-8023. During this telephone call, parents will be referred to social work/case management staff in the nearest regional office. Applications are available on the CSHCN website: www.tdh.state.tx.us/cshcn. A resource guide for CSHCN and their families may be obtained by using the website or calling the toll-free number above.

Follow-up Letter
The law requires that the parents/guardians of students with abnormal screening results be notified in writing. For this purpose, use the “Parent Notification and Referral” (Appendix A) as prescribed by the Department, which contains the results of screening and is accompanied by a letter advising the parent, guardian or managing conservator of his/her responsibility to select an appropriate health practitioner for the professional examination.

Referrals
The school screening coordinator or designee should maintain a record of students whose health care providers report no abnormalities, but about whom there is continuing concern on the part of the screener. These students should be tracked as follows:

1) Schedule students to be seen by the school physician or nurse who can be in communication with the student’s own health care provider.

2) If the student’s health care provider continues to feel that no further action is indicated, re-screen the student in three to six months.

3) If concerns persist, these should be discussed with the family and a second opinion should be considered.
The school nurse and physical education instructor should be aware of students who are wearing braces. The school nurse may need to supervise skin care. In most cases, students who wear braces are encouraged to participate in a wide range of physical education activities, but the health care provider’s recommendations will need to be followed.

**Spinal Screening Report Form (M-51)**
The Spinal Screening Report Form (M-51) (See Appendix A) enables the Department to compile statistics and collect data regarding the screening results and the diagnostic outcomes of children with possible abnormal spinal curvature. In order to obtain accurate data, it is important that Form M-51 be as complete as possible, indicating the results of the referral. Detailed instructions are found on the back of the form and it is due by June 30th of each reporting year.

**Late Exam Results**
On the back of the Spinal Screening Report Form is a smaller table entitled Late Exam Results. This table is provided for districts to record and submit the results of any student spinal screening referrals that were returned to the district after the submittal of the previous year's report form to TDH. If there are no late results available, then this table may be left blank.

**Documentation**
Record on the student’s record the date and results of the screening as well as the results of any referral.
SAMPLE PRESS RELEASE

A STATEWIDE SCREENING PROGRAM IS BEING OFFERED

The Legislature passed a law in 1985 that requires all sixth- and ninth-grade students to be screened for spinal deformities. Early detection of abnormal spinal curvature can prevent serious health problems. This is a problem that may begin during the early adolescent years (from 10 – 14 years of age), with an estimated 1 in 10 adolescents having some degree of abnormal curvature. Curves that are detected early may only require periodic observation by a specialist. Moderate curves may require the wearing of a brace, which is usually supervised by an orthopedic specialist. In most cases, the need for major surgery for this deformity can be eliminated through early detection.

Spinal screening for ________________________________
(City or School District)
school children has been scheduled to begin on ________________________,
(Day of Week)
__________________________.
(Date)

Children will be screened for two types of spinal deformities: scoliosis and kyphosis. Scoliosis is a condition in which the spine is twisted, causing misalignment of the upper body or lower back. This condition can worsen and lead to much pain, as well as complications of the heart and lungs. Kyphosis is an exaggerated rounding of the spine. Progression of these two conditions can often be arrested if detected early.
SAMPLE PRE-SCREENING LETTER TO PARENTS

Dear Parent/Guardian:

The ________________________ School will be conducting spinal screening on _________________. The purpose of spinal screening is to detect the signs of abnormal curves of the spine at their earliest stages so that the need for treatment can be determined. Scoliosis, a common spinal abnormality found in adolescents, is a sideways twisting of the spine. It is usually detected in children between 10 and 14 years of age. Kyphosis, sometimes called round back, is an exaggerated rounding of the upper back and is often confused with poor posture. Many cases of curvature of the spine are mild and require only ongoing observation by a physician when they are first diagnosed. Others can worsen with time as the child grows and require active treatment such as bracing and surgery. Early treatment can prevent the development of a severe deformity, which can affect a person’s appearance and health.

The procedure for screening is simple. Screeners who have been specially trained will look at your child’s back while he/she stands and then bends forward. For this examination, boys and girls will be seen separately and individually.

ALL STUDENTS MUST REMOVE THEIR SHIRT FOR THIS EXAM. FOR THIS REASON, GIRLS ARE REQUESTED TO WEAR A HALTER TOP, TUBE TOP, SPORTS BRA, OR A TWO-PIECE SWIMSUIT UNDERNEATH THEIR SHIRT ON EXAM DAY.

Parents will be notified of the results of the screening only if professional follow-up is necessary. This screening procedure does not replace your child’s need for regular health care and check-ups.

According to law, all children in grades 6 and 9 are required to be screened. If, for religious reasons, you do not wish to have your child screened, you are to submit an affidavit of exemption to this office no later than _________________.

Thank you for your cooperation,

Sincerely,

School Administrator
Estimados Padres de:

La escuela ________________ conducirá un exámen de la columna vertebral en ________________. El propósito de este exámen es detectar señales de curvas anormales en la columna vertebral en su comienzo, para poder determinar el tratamiento necesario. Escoliosis, anormalidad de la columna encontrada comúnmente en adolescentes, es una torcedura oblicua de la columna. Generalmente se detecta en niños de 10 a 14 años de edad. Cifosis, algunas veces llamada joroba, es una exagerada curvatura arqueada de la parte superior de la columna que frecuentemente se confunde con mala postura. Muchos de los casos de curvatura son leves y solamente requieren ser observados por el médico con regularidad en su etapa inicial. Otros casos de curvaturas pueden empeorarse a medida que los niños crecen requiriendo de tratamiento activo, tales como chalecos ortopédicos o cirugía. Tratamiento a tiempo puede prevenir el desarrollo de una deformidad severa, la cual afecta la apariencia y la salud de la persona.

El procedimiento para examinar es sencillo. Personas especialmente entrenadas mirarán la espalda de su niño(a) estando de pie y luego al agacharse. Para este exámen las niñas y los niños se verán por separado y en forma individual.

TODOS LOS NIÑOS USARAN PANTALON CORTO DE GIMNASIA Y SIN CAMISA. A LAS NIÑAS SE LES PEDIRA QUE USEN UNA CAMISETA SIN MANGAS, PANTALONES CORTOS O UN TRAJE DE BAÑO DE DOS PIEZAS.

Se les notificará a los padres los resultados de este exámen, si es que se necesita un seguimiento profesional. Este procedimiento no reemplaza los cuidados médicos ni los chequeos regulares de su niño(a).

De acuerdo a la ley, se requiere que todos los estudiantes en los grados 6 a 9 sean examinados. Si por causas religiosas Ud. no desea que su niño(a) participe en el exámen, Ud. tendrá que presentar a esta oficina, una declaración juramentada de exención, no más tarde del ________________________.

Muchas gracias por su cooperación,

Atentamente,

_____________________
Administrador Escolar.
AFFIDAVIT OF RELIGIOUS EXEMPTION

STATE OF TEXAS

COUNTY OF ___________________________

BEFORE me, the undersigned authority, on this day personally appeared
______________________________________, who, after being duly sworn, deposes and says:

(Parent or Guardian)

“I understand that Texas law requires all public and private schools to screen children in
grades 6 and 9 for abnormal spinal curvature before the end of the school year, and that schools
may also choose to conduct their spinal screening programs in grades 5 and 8.

I hereby request that ______________________________________, NOT undergo
(Name of Student)
spinal screening because it conflicts with tenets and practices related to our religious affiliation.

_________________________________________

(Parent or Guardian)

Sworn and subscribed before me by the said _____________________________ on this
the _____________ day of _____________________, _________ .

____________________
Notary Public in and for the State of Texas
AFFIDAVIT OF RELIGIOUS EXEMPTION - Spanish

DECLARACION JURADA DE EXENCION RELIGIOSA

ESTADO DE TEXAS
CONDADO DE:______________________

ANTE mi, la subscrita autoridad, en este día compareció personalmente

______________________________, quien, después de haber sido debidamente
Juramentado, atestigua y dice:

“Yo entiendo que la Ley de Texas requiere que todas las escuelas públicas y
privadas revisen a los estudiantes de los grados 6 al 9 por curvatura de la columna vertebral
antes de finalizar el año escolar y, que las escuelas también pueden escoger conducir
este programa de examinación en los grados 5 a 8.

Por medio de la presente solicito que ___________________________ no participe en
la revisión de la columna vertebral ya que esto va en contra de los principios y practicas de
nuestra afiliación religiosa.”

______________________________
(Padre o Tutor legal)

Jurado y firmado ante mi por el susodicho_________________________ en este
día_______ del mes de___________________, ____________.

______________________________
(Notario Público por y para el Estado de Texas)
### SPINAL SCREENING WORKSHEET

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<tr>
<th>SCHOOL/DISTRICT:</th>
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<td>SCREENER:</td>
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<td>RE-SCREENER (if different from above):</td>
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<td>DATE OF SCREENING:</td>
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<td>CLASS:</td>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>Y/N</th>
<th>Y/N</th>
<th>Y(Date)/N</th>
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### FILLING OUT THE SPINAL SCREENING WORKSHEET:

To assist in re-screening and follow-up, it is helpful to note the position and finding you are concerned about. Use the letters by each position to code the positive findings that need to be re-screened. For example, place an “A & B” in column 5 if you see the head does not line up correctly when looking at the student’s back and one shoulder is lower than the other.
Dear Parent/Guardian:

Students in our schools were recently screened for a curve of the spine that can appear during the years of rapid growth between ages 10 and 16 years. Your child has signs of a possible curve listed below.

Two kinds of curves are scoliosis (sideways curve) and kyphosis (round back). It is your responsibility to take this form to a doctor of your choice who can do a complete check of the spine. After the doctor has examined your child and completed this form, please return it to school. If you cannot afford a doctor or have questions, contact the school for information.

Thank you for your cooperation: ____________________________

Signature of School Administrator or Nurse

Date

---

### SCREENING FINDINGS:

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<th>L</th>
<th>R</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>High Shoulder</td>
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<td></td>
<td></td>
<td>Shoulder blade stands out more than the other</td>
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<tr>
<td></td>
<td></td>
<td>Obvious curve of the spine in area of rib cage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Round back</td>
</tr>
</tbody>
</table>

Other: _____________________________________________________________________________________________

Screener’s Name and Title: ____________________________ Date: ____________________________

---

### PROFESSIONAL EXAMINATION REPORT:

Diagnosis: ______________________________________

Recommendations:

- [ ] No Treatment
- [ ] Treatment:
  - [ ] Observation
  - [ ] Brace
  - [ ] Surgery
  - [ ] Other (please describe): ____________________________
  - [ ] Referral (please describe): ____________________________

Activity Limitation (if any, please describe): ______________________________________

Additional Comments: ______________________________________

Return Appointment:

- [ ] No
- [x] Yes: Return Date: ____________________________

______________________________

Doctor’s signature or hand stamp

Date

Doctor’s Mailing Address: ____________________________

Phone: (____) ______________

---

### For school use:

This form completed and received by school (date): ____________________________

This form not returned to school (reason): ____________________________
PROGRAMA DE DETECCION DE LA COLUMNA VERTEBRAL
NOTIFICACION Y REFERENCIA A PADRES

Estimado Padre/Tutor:

Los estudiantes de nuestra escuela fueron examinados recientemente para la detección de una curva en la columna vertebral que puede aparecer en el periodo de crecimiento rápido de su hijo/a, que es entre los 10 a los 16 años. Su hijo/a tiene indicaciones de tener una de las dos posible curvas enlistadas abajo.

Los dos tipos de curvas son Escoliosis (curva de lado) y Cifosis (espalda encorvada). Es su responsabilidad llevar ésta forma al doctor que usted elija para que le puedan hacer un examen completo de la columna vertebral a su hijo/a. Después de que el doctor haya examinado a su niño/a, favor de llenar esta forma y enviarla a la escuela. Si usted no puede pagar por la visita al medico o tiene alguna pregunta, comuníquese con la escuela para que le den mas información.

Gracias por su cooperación:

Firma del Administrador o Enfermera de la Escuela

RESULTADOS DE DETECCION:

<table>
<thead>
<tr>
<th>I</th>
<th>D</th>
<th>Hombro más alto que el otro (High shoulder)</th>
<th>I</th>
<th>D</th>
<th>Costilla con joroba (Rib hump)</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
<td>[ ]</td>
<td>Omóplato más salido que el otro</td>
<td>[ ]</td>
<td>[ ]</td>
<td>Curva obvia en la parte baja de la espalda</td>
</tr>
<tr>
<td>[ ]</td>
<td>[ ]</td>
<td>Curva obvia en el área de la caja torácica</td>
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<td>[ ]</td>
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<tr>
<td></td>
<td></td>
<td>(Obvious curve of the spine in rib cage area)</td>
<td>(Obvious curve of spine in lower back)</td>
<td></td>
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</tbody>
</table>

Otro: ___________________________________________________________________________________________

Nombre del detector y título: _________________________________ Fecha: ________________

PROFESSIONAL EXAMINATION REPORT:

Diagnosis: ______________________________________________________________________________________

Recommendations (check all that apply):

[ ] No Treatment: [ ] Treatment: [ ] Observation [ ] Brace [ ] Surgery [ ] Other (please describe): [ ] Referral (please describe):

Activity limitation (if any, please describe): ______________________________________________________________________________________

Additional comments: ______________________________________________________________________________________

Return appointment: [ ] No [ ] Yes: Return date: ________________________________

Doctor’s signature or hand stamp __________________________________________ Date

Doctor’s Mailing Address: __________________________________________

Phone: ( ) __________________________________________________________________

For School Use:

[ ] This form completed and returned to school (date): ________________________________

[ ] This form not returned to school (reason): __________________________________________________________________________
### SPINAL SCREENING REPORT

**Form M-51**

**Number** ________________________________ (10 Digit PEIMS/TEA ID Number)

**Name of School District or Private School** __________________________________________

**City** __________________________ **County** __________________________

**Contact** __________________________

<table>
<thead>
<tr>
<th>Grade</th>
<th>Screened</th>
<th>Under Prior Treatment</th>
<th>Rescreened</th>
<th>Referred</th>
</tr>
</thead>
<tbody>
<tr>
<td>5M</td>
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<td>5F</td>
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<td>6M</td>
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<td>Totals</td>
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<table>
<thead>
<tr>
<th>Grade</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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</table>

<table>
<thead>
<tr>
<th>Physician's Diagnosis</th>
<th>Normal</th>
<th>Scoliosis</th>
<th>Kyphosis</th>
<th>Other</th>
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<table>
<thead>
<tr>
<th>Treatment Plan</th>
<th>Observation Only</th>
<th>Orthosis Bracing</th>
<th>Operation Surgery</th>
<th>Other</th>
<th>Results Unavailable</th>
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</table>

**Chief Administrator's Signature** __________________________

**Title of Chief Administrator** __________________________

**Submit Completed Form to TDH by June 30, __________**

For assistance completing this form contact the
TDH Spinal Screening Program at (512) 458-7700
INSTRUCTIONS FOR THE SPINAL SCREENING REPORT FORM M-51

School districts: use M-51 to report the cumulative district totals of the spinal screenings conducted at each campus.

Individual campuses: A copy of M-51 can be useful in reporting campus totals to the district.

Private / Non-traditional schools: use M-51 to report the results of annual spinal screening.

SCREENING RESULTS (COLUMNS A - D)
Grade: Enter numbers under the respective students’ grade (5-9) and sex (M or F).
(A) Students Screened: Enter number of students screened. Include students receiving a professional spinal screening outside the school.
(B) Under Prior Treatment: Enter number of students not screened because they are under treatment for a previously diagnosed spinal abnormality.
(C) Rescreened: Enter number of students that received the second school screening as a result of an abnormal finding during the initial school screening.
(D) Referred: Enter the number of rescreened students whose parents were sent a spinal screening parent notification and referral for a professional examination.

RESULTS OF REFERRAL (COLUMNS E - M)
This section is for recording the results of professional evaluations for those students referred.

DIAGNOSIS (Columns E - H)
(E) Normal: Enter number of students whose exam indicated normal curvature.
(F) Scoliosis: Enter number of students that received a diagnosis of scoliosis.
(G) Kyphosis: Enter number of students that received a diagnosis of kyphosis.
(H) Other: Enter number of students that received a diagnosis other than the above.

TREATMENT (Columns I - M)
Mark only one treatment for each student. If a student receives multiple treatments, for example, bracing AND observation, include that student under the indicated treatment column farthest to the right (i.e. Bracing).
(I) Observation Only: Enter number of students to be observed only at this time.
(J) Bracing: Enter number of students for whom a brace has been prescribed.
(K) Surgery: Enter number of students for whom surgery has been prescribed.
(L) Other: Enter number of students for whom a treatment not listed above is prescribed.
(M) Results Unavailable: Enter number of students referred for whom results of a professional exam are not currently available. These results can be included on the following year’s report form in the LATE EXAM RESULTS section.

NOTE: Sum of Columns E, F, G, H and M should equal sum of column D.

CHIEF ADMINISTRATOR SIGNATURE: Form should be reviewed and signed by a chief administrative representative of the district and/or private school.

LATE EXAM RESULTS

The table below is provided for you to input results from those referrals (if any) that were returned too late to be included on last year’s spinal screening report form.

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<thead>
<tr>
<th>Grade</th>
<th>Normal</th>
<th>Scoliosis</th>
<th>Kyphosis</th>
<th>Other</th>
<th>Observation</th>
<th>Bracing</th>
<th>Surgery</th>
<th>Other</th>
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E F G H I J K L
SPINAL SCREENER CERTIFICATION WORKSHOP AGENDA
(SAMPLE)

Introduction

Screeners’ Pre-Test

Spinal Screening Program Requirements

Causes, Consequences and Management of Abnormal Spinal Curvature

BREAK

Forward Bend-Test – Discussion and Demonstration

Practicum

Organizing the Spinal Screening Program

Screeners’ Post-Test

Evaluation of Workshop

OBJECTIVES OF SPINAL SCREENING WORKSHOP AGENDA

At the conclusions of the workshop, participants will be able to:

1. Discuss the responsibilities of schools in the area of spinal screening
2. Define abnormal spinal curvature
3. Describe the population at risk for developing abnormal spinal curvature
4. List the causes, consequences and management of abnormal spinal curvature
5. Perform the forward bend test according to Texas Department of Health guidelines
6. Describe the mechanisms for referral and follow-up for students with possible abnormal spinal curvatures
SPINAL SCREENING PRE-TEST

In front of each statement, place a T for True or an F for False.

_____ 1. Boys and girls have an equal chance of developing scoliosis, but curves that progress occur mostly in girls.

_____ 2. Most cases of scoliosis are usually detected during early adolescence.

_____ 3. Kyphosis is an exaggerated arch or roundness of the spine during early adolescence.

_____ 4. One problem with scoliosis is that no one can predict for sure which curves will progress, so it requires monitoring to see if it is getting worse.

_____ 5. A brace to treat a spinal problem is usually worn day and night for best results.

_____ 6. Scoliosis is a side to side curve of the spine.

_____ 7. Kyphosis is often mistaken for poor posture.

_____ 8. Diseases with well known causes are known as “idiopathic.”

_____ 9. Although scoliosis may be present in 2% to 3% of the adolescent population, the number of cases requiring bracing or surgery is very small.

_____ 10. The state law requiring spinal screening is optional.

_____ 11. Screener certification is valid indefinitely.

_____ 12. Tracking referrals to assure that a proper diagnosis is made when abnormalities are suspected is part of an effective screening program.

_____ 13. Children who were not screened because of absence may wait until the following year to be screened.

_____ 14. The recommended test for the detection of spinal deformity is known as the forward bend test.

_____ 15. All children adapt easily to the use of the brace.

_____ 16. According to Texas law, a parent may choose to take his/her child to a doctor for a professional evaluations in lieu of screening.

_____ 17. There are resources for an orthopedic evaluation if the family has no money.

_____ 18. A referral is considered complete when the outcome of the student’s professional examination (referral results) has been recorded in the student’s school health record.
TEXAS DEPARTMENT OF HEALTH
SPINAL SCREENING PROGRAM
PRACTICUM CHECKLIST

SCREENER:

1. Greets student. ______________________

2. Gives clear instructions for Position 1. ______________________
   a. Checks for shoulder height ______________________
   b. Checks for unequal space between arms and flanks ______________________
   c. Checks for uneven hips ______________________

3. Gives clear instructions for Position 2. ______________________
   a. Checks for chest cage hump ______________________
   b. Checks for lumbar hump ______________________

4. Gives clear instructions for Position 3 ______________________
   a. Checks for exaggerated roundness in upper back ______________________
   b. Checks for exaggerated arch in lower back ______________________

5. Givers clear instructions for Position 4 ______________________
   a. Checks for exaggerated roundness on upper back or Between lower rib cage and small of the back ______________________

6. Gives clear instructions for Position 5 ______________________
   a. Checks head alignment ______________________
   b. Checks shoulder height ______________________
   c. Checks for asymmetry of shoulder blades (one stands out more or is higher than the other) ______________________
   d. Checks for spine curve ______________________
   e. Checks for unequal spaces between arm and flanks on either side of body ______________________

7. Gives clear instructions for Position 6 ______________________
   a. Checks for chest cage hump ______________________
   b. Checks for lumbar hump ______________________

Screener’s Name: _______________________________ Date: ______________________
Evaluator: _______________________________
TEXAS DEPARTMENT OF HEALTH
BUREAU OF CHILDREN’S HEALTH

SPINAL SCREENING POST TEST

For questions 1-9, circle (T) for True statements or (F) for False statements.

1. The goal of spinal screening in the school is to identify spinal curves early and refer to prevent progression.  
   
2. Carrying a heavy load such as books on one side can cause idiopathic scoliosis.  
   
3. To get the best results from a spinal orthosis (brace), the student needs to wear it 16 hours a day.  
   
4. If positive findings are present after the first spinal screening, the next step is to notify the parents.  
   
5. An appearance of a curve means you have identified scoliosis.  
   
6. According to Spinal Screening Law (HB 832), screening for abnormal spinal curvature must be performed on children in grades 6 & 9.  
   
7. A child who is home ill on screening day should be rescheduled for screening within two weeks of the missed screening.  
   
8. Serious progression of a spinal curve is most likely to occur during the rapid growth spurt of adolescents.  
   
9. If a family has no financial resources for an orthopedic evaluation, no referral can be made or treatment received.
For questions 10 – 19, match each statement with the correct response.
Circle R for Rescreen/Refer or N for Normal Finding.

R  N  10. One shoulder higher than the other
R  N  11. Head centers directly above pelvis
R  N  12. One shoulder blade higher or more prominent than the other
R  N  13. Equal space between the arms and the body on both sides
R  N  14. One hip higher than the other
R  N  15. Space between the arms and the body is greater on one side than the other
R  N  16. Excessive roundness of the thoracic spine seen in the side view
R  N  17. Upper body appears to lean to one side even when they stand up straight.
R  N  18. The head is not centered directly above the pelvis.

19. The drawing to the right illustrates a student who you would
    R – Rescreen / Refer
    N – Consider Normal

20. The drawing to the right illustrates a student who you would
    R – Rescreen / Refer
    N – Consider Normal
Questions 21 – 25 are multiple choice. Circle the correct answer for each question. There is only one correct answer per question.

21. What is the most important factor in the treatment of spinal problems?
   a. Bracing only
   b. Surgery and a brace
   c. Surgery following exercise
   d. Early detection

22. When screening, the student will be viewed both standing and bending over
   a. From the front and back
   b. From the back only
   c. From the side and back
   d. From the front, side and back

23. When is a referral considered complete?
   a. When the family is notified to see a physician
   b. When the child is evaluated by the physician
   c. When the physician decides to start treatment
   d. When the physician’s evaluation is recorded on the child’s health record.

24. How can the screener help the student who has been diagnosed with a spinal deformity?
   a. Tell them they should never participate in any sports
   b. Encourage them to follow their treatment plan
   c. Tell them surgery is always needed
   d. Encourage them to see you monthly for re-screening

25. What is the cause of idiopathic scoliosis?
   a. Participating in heavy contact sports
   b. Slouching while watching television
   c. Carrying a heavy book bag over one shoulder
   d. The actual cause is unknown
APPENDIX C
An Act relating to a mandatory spinal screening program to detect abnormal spinal curvature in children.

Be it enacted by the Legislature of the State of Texas:

SECTION 1. DEFINITIONS. In this Act:
(1) “Board” means the Texas Board of Health.
(2) “Department” means the Texas Department of Health.

SECTION 2. SPINAL SCREENING. (a) The department, in cooperation with the Central Education agency, shall establish a program to detect abnormal spinal curvature in children.
(b) It is the intent of the legislature that the department provide certification training for nonhealth practitioners through Central Education Agency Regional Centers.
(c) The board, in cooperation with the Central Education Agency, shall adopt rules for the mandatory spinal screening of children in grades 6 and 9 attending public or private schools. The department shall coordinate the spinal screening program with any other screening program conducted by the department on that population.
(d) If the rules require an individual to be screened, the individual shall undergo approved spinal screening tests. The individual’s parent, managing conservator, or guardian may elect to substitute professional examinations for the required screening tests.
(e) An individual is exempt from the screening requirements of this section if the screening tests conflict with the tenets and practices of a recognized church or religious denomination of which the individual is an adherent or a member. The individual’s parent, managing conservator, or guardian shall submit to the chief administrator on or before the day of the screening procedure an affidavit stating the objections to screening.
(f) The chief administrator of each school shall ensure that each individual admitted to the school complies with the screening requirements set by the board or submits an affidavit of exemption.
(g) The department may coordinate the spinal screening activities of school districts, private schools, state agencies, volunteer organizations, and other entities so that the efforts of each entity are complementary rather than augmented and duplicative. The department may provide technical assistance to those entities in developing screening programs.
(h) Rules adopted by the board under this Act shall not require any expenditures by schools other than incidental expenses required for certification training for nonhealth practitioners and for notification requirements under Section 5.

SECTION 3. ADDITIONAL POWER AND DUTIES. (a) The board shall adopt substantive and procedural rules necessary to administer screening activities.
(b) The department may train persons who administer the spinal screening procedure and may approve training programs.
(c) The department shall monitor the quality of screening activities provided under this Act.
(d) The department may enter into contracts and agreements necessary to administer this Act.
(e) The department may provide educational and other materials to assist local screening activities.
(f) The department may accept appropriations, donations, and reimbursements and may apply those items to the purposes of this Act.

SECTION 4. QUALIFICATIONS OF SCREENING PERSONNEL. (a) A person who provides spinal screening services authorized by this Act must be appropriately licensed or certified as a health practitioner or certified as having completed an approved training program in spinal screening.
(b) A person who provides a professional examination authorized by this Act for abnormal spinal curvature must be appropriately licensed or certified as a health practitioner.

SECTION 5. NOTIFICATION OF SCREENING RESULTS. If the screening indicates that an individual may have abnormal spinal curvature, the individual performing the screening shall fill out a report on a form prescribed by the department. The chief administrator of the school shall retain one copy of the report and shall mail one copy to the parent, managing conservator, or guardian of the individual screened.

SECTION 6. EMERGENCY. The importance of this legislation and the crowded condition of the calendars in both houses create an emergency and an imperative public necessity that the constitutional rule requiring bills to be read on three several days in each house be suspended, and this rule is hereby suspended, and that this Act take effect and be in force from and after its passage, and it is so enacted.

Passed by the House on May 9, 1985, by a non-record vote; passed by the Senate on May 21, 1985, by the following vote: Yeas 31, Nays 0.
Approved: June 15, 1985
Effective: August 26, 1986
§ 37.141. Purpose

The purpose of these rules is to implement the requirements of Texas Civil Statures. Article 4477-70, relating to the detection of abnormal spinal curvature in children.

Sources: The provisions of this § 37.141 adopted to be effective March 21, 1986, 11 TexReg 1145.

§ 37.142 Definitions

The following word and terms, when used in these sections, shall have the following meanings, unless the context clearly indicates otherwise.

Abnormal spinal curvature – An anatomic, structural deviation from the normal spinal curve, such as scoliosis or kyphosis.

Approved instructors – includes department staff and those health practitioners who are appropriately licensed under state law, with at least two years of school spinal screening experience, and who successfully complete the department’s instructor training course.

Approved training program – a program that meets the criteria set by the department for training individuals to conduct spinal screening.

Board – The Texas Board of Health.

Certification training – Department-approved training which qualifies the individual to receive a certificate stating that the person may perform spinal screening or teach a spinal screening course.

Child’s health record – The official health record(s) maintained in a school on a child.

Conflict of interest – The use of the screening process for solicitation of follow-up services which enable the individual, his/her immediate family members or professional associates to benefit financially, or earn favors or free publicity as a result of the screening process.

Department – The Texas Department of Health.

Forward-bend test – the department-approved screening procedure to assess a possible presence of an abnormal spinal curvature.

Health practitioner – Any person who has completed a course of study in a field of health and who is appropriately licensed under state law, which includes physicians, chiropractors, physical therapists, and registered nurses.

Non-health practitioner – a person who is not a health practitioner, which generally includes teachers, coaches, trainers, parents, and volunteers.

Professional examination – An evaluation performed by a health practitioner licensed under state law and whose expertise addresses the diagnostic needs of the individual identified as having a possible spinal deformity.

School – An educational institution that admits children who are between five – 21 years of age, which includes an individual school campus.

§ 37.143. Stage of the Department's Authorization

The department in cooperation and coordination with the Texas Education Agency and other department bureaus, divisions or programs serving school-age children, shall develop, implement, and administer a program for the detection of abnormal spinal curvature in children. The program shall be known as the Texas Spinal Screening Program, which is authorized to:

(1) provide certification training for spinal screening to non-health practitioners at the Texas Education Agency service centers and other locations;

(2) approve spinal-screening training programs, including approval of instructors of these training programs;

(3) establish the standard spinal screening tests and referral criteria;

(4) coordinate spinal screening activities of school districts, private schools, state agencies, volunteer organizations, and other entities to prevent duplication;

(5) monitor the quality of spinal screening activities in Texas;

(6) issue reporting forms;

(7) provide educational and other materials to assist local spinal screening activities; and

(8) keep a roster of approved instructors and screeners who have become certified under these sections.

Source: The provisions of this § 37.143 adopted to be effective March 21, 1986, 11 TexReg 1145.

§ 37.144. Certification Training for Non-health Practitioners

The department shall be responsible for monitoring the quality of spinal screener training activities under the following guidelines:

(1) The department shall provide certification training for non-health practitioners.

(2) The certification training of non-health practitioners shall be by Department staff or department-approved instructors.

(3) The spinal screening course shall include:

(a) definition of abnormal spinal curvature;

(b) causes, consequences, and management of abnormal spinal curvature;

(c) procedure for performing the forward-bend test;

(d) notification of screening results and follow-up procedures;

(e) spinal screening program standards and re-
sponsibilities; and

(f) the reporting of statistical data.

(4) Department staff or department-approved instructors shall issue a certificate to an individual who successfully completes a department-approved spinal-screening training program. The certificate will indicate that the screener is approved by the Department to perform spinal screening for a period of five years.

(5) The certificate described in paragraph (4) of this section will be renewable upon successful completion of an approved continuing education course in spinal screening.

Source: The provisions of the § 37.144 adopted to be effective March 21, 1986, 11 TexReg 1145.

§ 37.145 Approval of Training Programs and Instructors

(a) In order to become an approved instructor, a health practitioner must be appropriately licensed under state law and successfully complete the department training course consisting of a minimum of six hours of instruction by department staff that includes:

(1) legal requirements in spinal screening;
(2) workshop outline and materials to be used;
(3) an update on the latest advances in the management of spinal deformity;
(4) spinal screening program requirements;
(5) approaches to spinal screening training; and
(6) the role of the different health practitioners in spinal screening.

(b) In addition, the individual must have a minimum of two years of school spinal-screening experience.

(c) A certificate verifying instructor status will be issued upon successful completion of the requirements stated in subsections (a) and (b) of this section.

(d) In order to maintain instructor status, the individual must successfully complete each updated continuing education course provided by the program upon notification of the availability of such a course.

(e) All training programs conducted by approved instructors must be approved by the department at least 10 working days in advance of the training session. The criteria which the department will consider for approval is submission of:

(1) the program outline;
(2) instructor’s name, address, and professional license number;
(3) instructor’s spinal screening certificate number;
(4) number of persons to be trained;
(5) a copy of the agenda; and
(6) the program date and location.

(f) Once approved, the department may provide instructional materials, as they are available, to the approved instructors.

Source: The provisions of this § 37.145 adopted to be effective March 21, 1986, 11 TexReg 1145.

§ 37.146. Termination of Screener of Instructor Participation

(a) Approval of an instructor may be suspended or terminated if the instructor:

(1) fails to follow the department’s rules for training of screeners;
(2) fails to notify the department of scheduled workshops at least 10 working days in advance of said workshops;
(3) fails to maintain instructor status by participating in the continuing education courses provided by the Department;
(4) makes unethical referrals, i.e., referrals that could indicate a conflict of interest on the part of the instructor; or

(b) Approval of a screener may be suspended or terminated if the screener:

(1) fails to maintain screener certification;
(2) fails to screen according to department rules;
(3) fails to report screening results according to department rules;
(4) makes unethical referrals, i.e. referrals that would indicate a conflict of interest on the part of the screener, or

(c) Before the department suspends or terminates an individual’s participation in the program, the department will give the individual the opportunity for a hearing in accordance with §§1.21-1.32 of this title (relating to Formal Hearing Procedures).

Source: The provisions of this §37.146 adopted to be effective March 21, 1986. 11 TexReg 1145.
§ 37.147. Standards for Spinal Screening Testing

The department and school districts, private schools, state agencies, volunteer organizations, and other entities performing spinal screening shall adhere to the following standards.

1. The basic spinal screening test known as the forward-bend test, shall be used to screen children for abnormal spinal curvature. A description of the test is available from the Texas Department of Health, Bureau of Children’s Health, 1100 West 49th Street, Austin, Texas 78756.

2. In order to avoid over-referrals, children failing the initial screening shall be re-screened using the forward-bend test prior to parental notification of the possible presence of an abnormal spinal curvature.

Source: The provisions of the §37.147 adopted to be effective March 21, 1986, 11 Tex Reg 1145.

§ 37.148. Responsibilities of Public and Private Schools

(a) Beginning September 1, 1986, all children in grades six and nine attending public and private schools shall be screened for abnormal spinal curvature before the end of the school year. The screening requirements may also be met by a professional examination as defined in §37.142 of this title (relating to Definitions).

(b) Beginning September 1, 1986, children not previously screened who are entering the 6th and 9th grades after the scheduled screening has been performed, shall be screened within 120 days of enrollment in the school.

(c) The screening requirement for children entering grade six or nine may be met if the child has been screened for spinal deformities during the previous year. Schools may implement a program that includes screening in the 5th and/or 8th grade.

(d) The chief administrator of each school shall ensure that every child in grades six or nine complies with the screening requirements or submits an affidavit of exemption. An affidavit shall be signed by the child’s parent, managing conservator, or guardian that spinal screening conflicts with the tenets and practices of a recognized church or religious denomination of which the child is an adherent or a member. This affidavit shall be submitted to the school’s chief administrator on or before the day of the screening procedure each year the screening is performed, to meet the requirements of the Act. A copy of this affidavit shall be filed in the child’s health record.

(e) If the spinal screening test indicates that a child may have an abnormal spinal curvature, the individual performing the test shall fill out a report on a form prescribed by the department. The chief administrator of the school shall retain one copy of such report and send the original to the parent(s), managing conservator, or guardian of the child screened. The form shall contain information regarding the results of the screening and shall be accompanied by a letter advising the parent, managing conservator or guardian of his/her responsibility to select an appropriate health practitioner for the examination.

(f) A copy of the previously mentioned report shall be filed at the child’s school and an entry shall be made in the child’s health record. The original is returned with the final diagnosis and the plans for treatment, as indicated.

(g) The chief administrator of each school shall monitor the referral process and encourage a professional exam, and may provide information about crippled children’s services to families unable to afford private care.

(h) A list of children who failed the spinal screening test may be kept to assist in determining whether a professional examination has occurred.

(i) Proof of screening shall be provided by an entry in the child’s health record stating that the child has undergone screening tests that meet the standards outlined in these sections. Such an entry shall also include the results of screening.

(j) Personnel performing screening may maintain a list of children screened for spinal deformities as proof of screening.

(k) In cases when a professional examination was performed in lieu of the required screening test, the date, results, name, and title of the professional performing the exam shall be entered in the child’s health record.

(l) The chief administrator of each school shall ensure that each individual complies with the screening requirements in these sections.

(m) Each school shall submit to the department an annual report of spinal screening performed during the school year no later than June 30 of the reporting year. The report shall be submitted by the chief administrator of each school district as specified on a form issued by the department.

(n) The child’s health record shall be acceptable as proof of screening if such record contains entries of screening results. In such a case, the original or a true and correct copy of that record may be transferred between schools and shall be honored by the governing body of the school upon transfer of a student from another school in Texas or another school within the United States.

Source: The provisions of this §37.148 adopted to be effective March 21, 1986, 11 Tex Reg 1145.

§ 37.149. Responsibilities of Parent, Managing Conservator, or Guardian

When possible abnormal spinal curvature is detected, the parent, managing conservator, or guardian is responsible for securing the services of a qualified health practitioner to perform a professional examination to diagnose the problem.

Source: The provisions of this §37.149 adopted to be effective March 21, 1986, 11 Tex Reg 1145.

§ 37.150. Further Responsibilities of the Department

(a) Quality assurance activities.

(1) In order to monitor the quality of spinal screening services, department personnel may enter schools during normal hours and inspect records maintained on children subject to screening in each school for the purpose of ascertaining statistical informa-
tion, and may directly observe the spinal screening process.

(2) The department shall compile records and statistics from all spinal screening activities reported to this program in order to collect data concerning the quality of the diagnostic outcomes of children with possible abnormal spinal curvature.

(b) Coordination and cooperation. The department shall encourage coordination and cooperation in areas where more than one entity provides spinal screening so that the efforts of each entity are complementary, rather than augmented and duplicative.

Source: The provisions of this § 37.150 adopted to be effective March 21, 1986, 11 TexReg 1145.

§ 37.151. Confidentiality of Information

The department shall maintain confidentiality of those individuals screened as authorized by law.

Source: The provisions of this § 37.151 adopted to be effective March 21, 1986, 11 TexReg 1145.

§ 37.152. Nondiscrimination Statement

The department operates in compliance with Title VI, Civil Rights Act of 1964 (Public Law 88-352), so that no person will be excluded from participation in the program, be denied the benefits of the program, or be otherwise subjected to discrimination on the grounds of race, color, national origin, sex, creed, handicap, or age.

Source: The provisions of this § 37.152 adopted to be effective March 21, 1986, 11 TexReg 1145.
TEXAS HEALTH AND SAFETY CODE

CHAPTER 37. ABNORMAL SPINAL CURVATURE IN CHILDREN

Sec. 37.001. Screening Program for Abnormal Spinal Curvature.

(a) The department, in cooperation with the Texas Education Agency, shall establish a program to detect abnormal spinal curvature in children.

(b) The board, in cooperation with the Texas Education Agency, shall adopt rules for the mandatory spinal screening of children in grade 6 and 9 attending public or private schools. The department shall coordinate the spinal screening program with any other screening program conducted by the department on those children.

(c) The board shall adopt substantive and procedural rules necessary to administer screening activities.

(d) A rule adopted by the board under this chapter may not require any expenditure by a school, other than an incidental expense required for certification training for nonhealth practitioners and for notification requirements under Section 37.003.

(e) The department may coordinate the spinal screening activities of school districts, private schools, state agencies, volunteer organizations, and other entities so that the efforts of each entity are complementary and not duplicative. The department may provide technical assistance to those entities in developing screening programs and may provide educational and other material to assist local screening activities.

(f) The department shall monitor the quality of screening activities provided under this chapter.


Amended by acts 1997, 75th Leg., ch. 165, Sec. 6.36, eff. Sept. 1, 1997

Sec. 37.002. Compliance With Screening Requirements.

(a) Each individual required by board rule to be screened shall undergo approved screening for abnormal spinal curvature. The individual’s parent, managing conservator, or guardian may substitute professional examinations for the screening.

(b) An individual is exempt from screening if screening conflicts with the tenets and practices of a recognized church or religious denomination of which the individual is an adherent or a member. To qualify for the exemption, the individual’s parent, managing conservator, or guardian must submit to the chief administrator on or before the day of the screening procedure at the affidavit stating the objections to screening.

(c) The chief administrator of each school shall ensure that each individual admitted to the school complies with the screening requirements set by the board or submits an affidavit of exemption.


Sec. 37.003. Reports.
(a) If the screening performed under this chapter indicates that an individual may have abnormal spinal curvature, the individual performing the screening shall fill out a report on a form prescribed by the department.

(b) The chief administrator of the school shall retain one copy of the report and shall mail one copy to the parent, managing conservator, or guardian of the individual screened.


Section. 37.004 Qualifications of Persons Providing Screening.

(a) The department may train personal who administer the spinal screening procedure and may approve training programs.

(b) A person who provides screening services authorized by this chapter must be:

(1) appropriately licensed or certified as a health practitioner; or

(2) certified as having completed an approved training program in screening for abnormal spinal curvature.

(c) A person who provides a professional examination authorized by this chapter for abnormal spinal curvature must be appropriately licensed or certified as a health practitioner.

(d) It is the intent of the legislature that the department provide certification training for nonhealth practitioners through Texas Education Agency regional education service centers.


Amended by Acts 1997, 75th Leg., ch. 165, Sec. 6.37, eff. Sept. 1, 1997.

Sec. 37.005 Funding

The department may accept appropriations, donations, and reimbursements and may apply those items to the purposes of the chapter.


Sec. 37.006 Contracts.

The department may enter into contracts and agreements necessary to administer this chapter.

Acts 1989, 71st Leg., ch. 678, Sec. 1, eff. Sept. 1, 1989
SETTIGN UP THE SCHOOL SPINAL SCREENING

Confirm the support of chief administrators, parents & local medical community

Recruit screener(s) and send them to obtain certification if needed.

Determine spinal screening date, location and facility

Send out pre-screening letter and orientation materials to parents

Conduct student orientation and education to prepare them for screening

Obtain screening forms (Report form, worksheet, parent referrals)

Conduct spinal screening

Record negative screening results in student’s record

Conduct second screening for students absent from first one

Record positive screening result in student’s record

Rescreen students w/ positive findings in two weeks

If rescreen does not indicate abnormality, record results in student’s record

Notify and refer parents of students with positive findings

Record medical diagnosis and treatment in student’s record

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## SPINAL SCREENING PROGRAM RESOURCES

<table>
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<th>RESOURCES</th>
<th>CONTACT</th>
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<tr>
<td><strong>Financial Assistance</strong></td>
<td>TDH Children w/ Special Health Care Needs Program</td>
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| Students referred to a physician for a possible spinal deformity may be eligible for the TDH Children w/ Special Health Care Needs program. This program helps pay for the cost of the examination and any necessary treatment. Qualification is based on income and need. | 1100 West 49th Street, Austin, TX 78756  
1 (800) 252-8023  
WEBSITE: [www.tdh.state.tx.us/cshcn](http://www.tdh.state.tx.us/cshcn) |
| **Instructional Videos / Slides**          | TDH Audiovisual Library                      |
| TDH has a selection of visual media to assist instructors in conducting workshops, and to orient students to the spinal screening process. Titles include: | 1100 West 49th Street, Austin, TX 78756  
(512) 458-7260  
Browse selections and order from internet:  
WEBSITE: [www.tdh.state.tx.us/avlib/avhomepg.htm](http://www.tdh.state.tx.us/avlib/avhomepg.htm) |
| - Growing Straighter and Stronger (for students prior to screening) | |
| - School Screening w/ Dr. Robert Keller (for screener workshops) | |
| - Spinal Screening Program (for screener workshops) | |
| - Dr. Richard Haynes of Shriners Hospitals for Children (for training trainers)  
(Lecture providing history, overview of screening, diagnosis and treatment of scoliosis) | |
| - Spinal Screening-How to Teach Instructors (for training trainers only) | |
| Numerous titles available. | |
| **Scoliometers**                           | School Health Corporation                    |
| This is one of numerous vendors that supply scoliometers as well as diagrams of the human spine. | 1 (800) 235-1305  
WEBSITE: [www.schoolhealth.com](http://www.schoolhealth.com) |
| **TDH Standard Spinal Screening Forms**    | TDH Spinal Screening Program                 |
| Forms may be photocopied from this book or ordered separately from the TDH Spinal Screening Program. Forms available include: | 1100 West 49th Street, Austin, TX 78756  
(512) 458-7700 |
| - Sample Press Release | |
| - Sample Pre-Screening Letter to Parents (English / Spanish) | |
| - Affidavit of Religious Exemption (English/Spanish) | |
| - Parent Notification and Referral (English/Spanish) | |
| - Spinal Screening Worksheet | |
| - Spinal Screening Report Form (M-51) | |
| **Website Resources**                      |                                               |
| - TDH Spinal Screening Program             | [www.tdh.state.tx.us/schoolhealth/spinal.htm](http://www.tdh.state.tx.us/schoolhealth/spinal.htm)  
[www.aaos.org](http://www.aaos.org)  
[www.srs.org](http://www.srs.org)  
[www.shriners.com](http://www.shriners.com) |
- American Academy of Orthopaedic Surgeons  
- Scoliosis Research Society  
- Shriners Hospitals for Children | |

**General Information on Spinal Screening in Texas Schools:** Call the TDH Spinal Screening Program at (512) 458-7700
DEFINITIONS

The most commonly used terms necessary for an understanding of identification, management and follow-up of abnormal spinal curvature.

Abnormal spinal curvature – an anatomic, structural deviation from the normal spine curve, such as scoliosis and kyphosis.

Cervical spine – neck portion of the spine.

Cobb method – method of measuring the angle of the scoliosis curve on a X-ray.

Forward Bend Test – the department – approved procedure to assess the possible presence of abnormal spinal curvature (also known as the Adams or 3-bend test).

Idiopathic – a condition with no known cause.

Kyphosis – abnormally increased roundness in the spine of the upper back as viewed from the side; also know as round back, hunchback, or humpback.

Lumbar spine – portion of the spine in the small of the back.

Milwaukee brace – an appliance used to treat abnormal spinal curvature.

Orthosis – the clinical term for brace.

Sacrum – lowest portion of the spine below the lumbar area.

Scheuermann’s disease – abnormally increased roundness of the upper back as viewed from the side; kyphosis; hunchback or round back.

Spinal instrumentation – a surgical procedure for the correction of abnormal spinal curvature by insertion of rods and hooks to hold the spine in a corrected position.

Scoliometer – an apparatus for measuring the clinical deformity of patients with scoliosis.

Screening – a test or procedure to determine the need for a professional diagnostic examination.

Spinal fusion – joining together of spinal segments so that they function as one.

Structural Scoliosis – side-to-side curve of the spine with twisting of the affected vertebrae.

Thoracic spine – the chest part of the spine.

TLSO (Thoracic Lumbosacral Orthosis) – an orthosis designed to support and bend these parts of the spine.


Scoliosis Research Society Graphics


Weinstein, SL. Adolescent idiopathic scoliosis: prevalence and natural history. *Instructional Course Lectures* XXXVIII:115-128.


SPINAL SCREENING PROGRAM WORKSHOP EVALUATION

**TOPIC AND INSTRUCTOR(S):**

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<thead>
<tr>
<th>Item</th>
<th>POOR</th>
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<th>AVERAGE</th>
<th>GOOD</th>
<th>EXCELLENT</th>
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<tr>
<td>Introductory Presentations or Remarks</td>
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<tr>
<td>Overall Quality of Instruction</td>
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<tr>
<td>Overall Quality of Curriculum Content</td>
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<tr>
<td>Relevance of Concepts and Their Applicability to Job Responsibilities</td>
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<td>2</td>
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<tr>
<td>Instructor(s) Ability to Relate Theory to Practice</td>
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<tr>
<td>Opportunities Provided for Participant Interaction</td>
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<td>2</td>
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<tr>
<td>Appropriateness of Workshop Format (i.e. length of sessions, etc.)</td>
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<tr>
<td>Stated Objectives Met</td>
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**ENVIRONMENT AND EQUIPMENT**

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<tr>
<td>Materials, Handouts, etc.</td>
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<tr>
<td>Visual aids, Illustrations</td>
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<tr>
<td>Workshop Facilities (room, equipment, breaks, etc.)</td>
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<td>Provisions for the Comfort of the Participants</td>
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**COMMENTS:**