



spotlight on health

From Designers To Shriners: 3-D Body Scanning A Promising New Technology

(NAPSA)—According to staff at Shriners Hospitals for Children in Springfield, Mass., the hospital is the first in the U.S. to pilot the use of a 3-D body scanner—a tool frequently used in the textile and garment industry to accurately assess how clothing fits. This new medical technology may significantly influence treatment and evaluation for children with spinal and chest wall deformities, such as scoliosis and pectus excavatum.

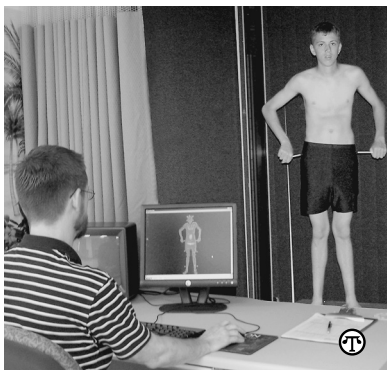
The traditional method for evaluating the severity of scoliosis is an X-ray-based measure called the Cobb Angle. The Cobb Angle measures the lateral curvature of the spine inside the body, and is used to plan treatment—such as bracing and surgery—and evaluate results.

However, the Cobb Angle does not look at the curvature of the spine in all directions, or how the curvature affects the shape of the back and chest wall or posture. Scoliosis treatment is directed at correcting the curvature of the spine, but how this affects the appearance of the outside of the body is not routinely measured.

3-D Scanner Creates Digital Twin

“The 3-D body scanner lets us see what’s happening to the shape of the body,” said George E. Gorton III, director of the Springfield Shriners Hospital’s Clinical Outcomes Assessment Laboratory. “X-rays don’t capture that.”

By scanning a patient’s body and creating a “digital twin” on a computer screen, the 3-D body scanner gives doctors the ability to objectively document the child’s alignment, posture, balance and other external features before and after correction procedures. The technology is a fast, repeatable and noninvasive way to get cus-



The 3-D body scanner resembles a dressing room. The patient stands in the center and within 15 seconds, four eye-safe lasers and eight synchronized cameras scan the body.

tomized measurements, including distances, circumferences and angles of the shoulders, ribs, hips and other body parts without using X-rays.

Body Appearance A Concern To Children

Body appearance is typically of great concern to children with scoliosis, who are most frequently girls between ages 10 and 15. Because spinal and chest wall deformities and correction procedures affect body shape, the Springfield Shriners Hospital is also studying patients’ satisfaction with physical appearance. Every child with a spinal or chest wall deformity seen in the Clinical Outcomes Assessment Laboratory at the Springfield Shriners Hospital completes a questionnaire relating to quality of life and satisfaction.

“The 3-D body scanner may be able to help us identify the features that cause the patient to be unhappy with his or her body,” said Gorton. “We may be able to find different ways to treat the deformities and improve body appearance and patient satisfaction, as well.”