

**SUBJECT:** Screening for acanthosis nigricans

**COMMITTEE:** Public Health — favorable, without amendment

**VOTE:** 7 ayes — Gray, Coleman, Capelo, Delisi, Glaze, Maxey, McClendon  
0 nays  
2 absent — Hilderbran, Uresti

**WITNESSES:** For — DeWayne Hill, M.D.; Evangelina T. Villagomez; Paul Villas  
Against — None

**BACKGROUND:** Acanthosis nigricans is a disorder that causes light brown-black, velvety, rough, or thickened areas on the surface of the skin, most frequently on the back of the neck. Pigmentation also can be concentrated around the armpits, knuckles, elbows, knees, soles of feet, inner thighs, and skin folds of the trunk. It is considered a primary marker for high insulin levels indicative of insulin resistance.

Diabetes is a disease in which the body does not produce enough insulin (Type 1 diabetes) or does not properly use insulin to control blood sugar (Type 2 diabetes). Chronic diabetes can lead to blindness, loss of limb function, amputation, dental problems, and heart problems.

Chpt. 36 of the Health and Safety Code requires the Texas Department of Health (TDH) board to require by rule screening of individuals who attend public or private preschools or schools to detect vision and hearing disorders.

**DIGEST:** The author's floor substitute for HB 1860 would implement a pilot program to screen children who attend public and private schools to detect acanthosis nigricans. The program would be established by the UT System Texas-Mexico Border Health Coordination Office and would run for the 1999-2000 school year in nine counties: El Paso, Hudspeth, Cameron, Hidalgo, Jim Hogg, Starr, Webb, Willacy, and Zapata. The executive council of the Border Health Coordination Office would be authorized to promulgate rules for the

pilot program. By January 1, 2001, the office would have to report the effectiveness of the program to the governor and the Legislature.

The rules would have to require screening to be performed at the same time hearing and vision screening has performed for school children. Screening tests would be defined as a rapid analytical procedure to determine the need for further evaluation.

The office could coordinate the acanthosis nigricans screening activities of school districts, private schools, state agencies, volunteer organizations, and other entities so that the efforts of each entity would be complementary and not duplicative.

Each child would have to comply with screening requirements as soon as possible after the child's admission to school and annually as required by board rule. A child would be exempt from screening if it conflicted with the tenets and practices of the child's religious denomination. School administrators would have to ensure that each child complied with screening requirements, and maintain records as prescribed by the executive council.

The person performing the screening would have to send a report indicating that a child may have acanthosis nigricans to the child's parents. It would include an explanation of the condition, instructions to help the child or family receive evaluation and treatment, and statements concerning access to financial or medical assistance for evaluation and treatment.

Each school would have to submit to the office an annual report on the screening status of the children attending school and any other information required by the board.

The bill would take effect September 1, 1999, and would expire September 1, 2001.

**SUPPORTERS  
SAY:**

HB 1860, as substituted by author's floor amendment, would implement a limited pilot project for acanthosis nigricans screening in the Texas-Mexico border area, where the incidence of diabetes is high and the University of Texas System already is conducting studies of diabetes and maintains a registry of identified diabetic adults.

HB 1860 would enact a minor change in screenings regularly performed by school nurses that could improve the health of children and reduce state and local governments costs for medical treatment and social services. Acanthosis nigricans is a common sign of obesity and Type 2 diabetes. Populations most at risk of acanthosis nigricans are Hispanics, African Americans, and Native Americans.

The incidence of obesity and diabetes seems to be rising among children. High blood pressure and high lipid levels have been found in children as young as five years old. If these conditions aren't treated, these children will not live beyond middle age. Chronic diabetes can lead to a variety of very serious health conditions, including blindness. Yet these conditions often can be prevented with changes in exercise and diet.

Diabetes is estimated to affect as much as 20 percent of the population in the Lower Rio Grande Valley. A recent study conducted by the University of Texas System's Texas-Mexico Border Health Coordination Office found that 80 percent of the people with acanthosis nigricans markers have high insulin levels, which is a precursor for insulin resistance and Type 2, also called "adult-onset," diabetes. The study also found that up to 25 percent of children in grades 4 through 6 had acanthosis nigricans markers.

Costs of this screening are minimal because it is already being done in many places in the border area, and very little training would be necessary. Screening can be done in seconds during a child's required vision and hearing screen. Most nurses know about acanthosis nigricans from their nursing education, and the screening does not require any measurements or special instruments. The darker pigmentation is very easy to see, even for lay people.

These screens also could save the state money by preventing the onset of diabetes, which can cost as much as \$300,000 over a child's lifetime. The House-passed version of HB 1, the general appropriations bill for fiscal 2000-01 contains an Article 11 "wish list" provision to fund the screening with \$150,000 for the biennium. The limited pilot project in the floor substitute would substantially reduce the fiscal note for the original bill, which would have implemented a statewide screening program.

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OPPONENTS  
SAY:

This bill would unnecessarily increase state spending. If acanthosis nigricans is so easy to detect, simple public education efforts, similar to those used for skin cancer warnings, could be enacted by nonprofit organizations or other institutions to advise parents to check their kids and family members for acanthosis nigricans, and to see a doctor if suspicious pigmentation areas are detected.

NOTES:

The version of HB 1860 reported from the Public Health Committee would have made the screening for acanthosis nigricans a statewide requirement, under the direction of the Texas Department of Health, rather than a nine-county pilot project for the 1999-2000 school year under the UT System Texas-Mexico Border Health Coordination Office, as the floor substitute by Rep. Gutierrez proposes.