

Focus on Mass Screening Programs: Are They Effective?

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School health screening is the process of using a relatively simple test to sort a group of students into those who do or do not have a particular health problem without having to do a complete examination. Screening programs have come under scrutiny as school districts struggle with financial constraints and increasing pressure to assure high academic performance for all students; questions have been posed about the need to screen all students for a variety of potential health problems including vision and hearing impairments, scoliosis, head lice, tuberculosis, asthma, etc. Screening can be expensive in terms of staff time, equipment costs, and student time away from academics. There is little evidence, pro or con, that measures either impact on health or education outcomes of mass screening programs.

Screening Criteria

To be valid, a good screening test must reliably identify which individuals actually have the disease or impairment and those who do not. A screening test is considered to be reliable when it gives consistent results if performed more than once on the same individual under the same conditions. The World Health Association, in a February 13, 2001

teleconference on asthma, and the American Academy of Pediatrics (AAP, 1993) set forth criteria that should be considered when planning any screening program.

- The condition must be an important health problem with high incidence and prevalence and associated adverse physical or psychological consequences.
- The natural history of the disease should be understood with accepted early intervention treatment that will effectively prevent or reduce consequences.
- There should be a recognizable latent or early symptomatic stage for which a screening test is available.
- There should be an easily performed, cost effective screening test that correctly separates those who have the health problem from those who do not.
- There should be consensus on treatment of the problem within the medical community.
- Facilities for more definitive diagnosis and treatment should be readily available to families of students who have positive screening tests.
- The test should be acceptable to the population and focused on groups in which the undetected problem is

most prevalent and early intervention would be most beneficial.

- The cost/benefit of screening/case finding should be balanced in relation to all expenditures and anxiety resulting from false-positive results.
- The screener must be well trained and able to make assessments if results are not definitive.
- The screening program should be a continuous process with an evaluation component to assist in determination of the need for improvement and/or changes in allocation of resources.

Most schools support, and many states mandate, screening programs to detect vision and hearing deficits; some support/mandate screening to detect scoliosis. Less standardized and often occurring as knee-jerk responses to publicity related to single or multiple cases, are school-wide programs to detect head lice and/or tuberculosis. And more recently, there has been discussion about routine mass screening to detect asthma, hypertension, sickle cell disease, and elevated cholesterol in school age children.

Because health resources are often limited in schools, the value of the proposed screening test should be weighed against the cost in money, resources, and academic time required to effectively carry out the program. The criteria listed in this article should be helpful as schools determine their priorities in relation to continuing current and/or implementing new screening programs.

References:

1. Nader, P.R. Ed. (1993). *School health: Policy and practice*. Elk Grove Village, IL: American Academy of Pediatrics.
2. World Health Organization (2001). *Screening populations for asthma: A review of the science*. Notes from teleconference, February 13, 2001.