

**Evaluation of Surveillance for Overweight and Other Physical Fitness Measures  
Among Los Angeles County School Children.**

*Summary*

**Stakeholders** include the children tested and their guardians; educators and administrators of public schools and school districts; local and state jurisdictions in public health, education, and public policy; and community advocates.

**System Description.** National studies have shown an epidemic rise in overweight among children in the United States. However, few data are available to assess the status of overweight in local child populations. In 1995, the California State Legislature mandated physical fitness testing (PFT) of all public school children in grades 5, 7, and 9, with a goal “to improve fitness level of California’s children.” The State selected the *Fitnessgram*, a battery of standardized tests that includes 6 measures of physical fitness: aerobic capacity, body composition, abdominal strength, back extensor strength and flexibility, upper body strength, and flexibility. Each fitness measure has a *Healthy Fitness Zone*, which is defined as the level of fitness that is associated with good health.

Schools perform testing in spring and report results on electronically scannable forms or by electronic transmission. The California Department of Education (CDE) collects the data statewide. CDE reports results to the Governor each November. Results are available to the public via the Internet.

**Evaluation Design:** The goal of this evaluation is to assess the California Physical Fitness Testing Program (CPFTP) as a surveillance tool for overweight and other

physical fitness measures in LAC school children. The evaluation was performed by reviewing the existing literature, performing preliminary data analysis, and speaking with relevant stakeholders.

**Credible Evidence:** National surveys of physical fitness measures in children have been inadequate to assess local populations and ethnic subgroups. However, CPFTP provides population-based data that may be useful to local jurisdictions to assess overweight and other physical fitness measures in children.

Not all of the Fitnessgram measures have well-established health-referenced standards and test reliability in children, and may not be useful for public health surveillance. The CPFTP includes body mass index (BMI) as a measure of body composition. BMI is an accepted epidemiologic screening tool and provides predictive value for obesity and other risk factors in adulthood. In addition, the reliability of tests for aerobic capacity has been validated in children. Standards for aerobic capacity in children are extrapolated from adult studies that show an association with all-cause mortality.

According to enrollment data from the California Basic Educational Data System, 89.1% of eligible students reported PFT results in 2001. In 20.2% of students tested, there was inadequate data to classify students into BMI categories. Ease of administration of the test battery at each school is affected by teacher training, preparation and maturity level of students, class sizes, and the testing environment.

**Recommendations.** BMI measurements and results of aerobic capacity testing from Fitnessgram testing provide useful data for public health surveillance. The county may wish to standardize testing options, training, and equipment to ensure uniform test administration. Further study is needed to validate the Fitnessgram field tests in this population. While testing covers a majority of the eligible population, further evaluation is needed to assess whether students or schools that report results are different from those that do not report. Additionally, the Cooper Institute has developed the Activitygram, a validated instrument to measure self-reported physical activity levels in children. The Activitygram is not currently a part of the California Physical Fitness Testing Program. If implemented, the Activitygram would allow public health tracking of how many students are meeting recommended physical activity levels.

**Lessons Learned.** As with communicable disease surveillance, a population-based system to track overweight and other physical fitness measures in children can provide important data to track trends, guide policy and advocacy efforts, and target resources to risk groups at the local level. While the CPFTP was designed as a system for school accountability, the program is a useful public health tool, and results can be analyzed and disseminated in ways that help local communities make important public health decisions.

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