# NM DOH Medical Oversight Committee position:

## Body Mass Index (BMI) Measurement in Schools

**(Position Approved by MOC October 16, 2009; finalized January 26, 2010)**

### Background:

With the growing problem of obesity among children and adolescents, attention is increasingly focusing on BMI measurement programs in schools. School nurses in NM are increasingly asked to participate in a wide variety of BMI measurement programs in the school setting, including surveillance and/or screening programs. Guidance from the NM DOH would provide a framework for decision making and hopefully support a wise allocation of the limited staff and financial resources that are available for child and adolescent obesity prevention efforts.

### Definitions.

BMI surveillance programs assess the weight status of a specific population to identify the percentage of students potentially at risk for weight-related health problems. Surveillance data are typically anonymous and are collected from a randomly selected sample of the population. Results are used for identifying population trends and, when feasible, monitoring outcomes of interventions.

BMI screening programs assess the weight status of individual students to identify those individuals at risk and provide those students and their parents with information to help them take appropriate action.

### National recommendations.

No consensus exists on BMI screening for children and adolescents in the school setting.

**American Academy of Pediatrics (AAP):** BMI screening programs do not meet all AAP criteria for school-based screening: effective treatments for obesity are not available; research has not established the effectiveness and cost-effectiveness of BMI screening programs; and communities typically do not have the resources to help at-risk individuals access treatment services.

**Centers for Disease Control and Prevention (CDC):** There is not enough evidence to recommend for or against school-based BMI measurement programs as an effective strategy for preventing or reducing childhood obesity. The CDC recommends specific safeguards to reduce risk of harming students if BMI measurements are undertaken in the school setting http://www.cdc.gov/features/childbmi/. The CDC also identifies 10 school-based strategies that are most likely to improve physical activity and healthy eating habits of young people, based on available scientific evidence http://www.cdc.gov/healthyyouth/keystrategies/index.htm.

**Institute of Medicine (IOM):** BMI should be annually screened at school.

### Experience in other states.

At least 13 states are implementing school-based BMI measurement programs for screening and/or surveillance. Some programs have already published results:

**Arkansas**: Act 1220 to Combat Childhood Obesity was passed by the state legislature in 2003, and mandated a number of initiatives, including BMI screening and parental reporting by schools. There has been no aggregate change in prevalence of overweight or obesity in

students (elementary through high school) during the five years that screening has taken place. Of note, this has been consistent with national trends as measured by the NHANES survey. A Year 4 Evaluation Report for Act 1220 published in 2008 showed real but very modest improvements in family nutrition and physical activity patterns. Some of the most impressive improvements in student behavior could be attributed to changes in school vending machine policies. Of note is that physical education participation sharply declined in Arkansas over the four year evaluation period.

**Florida**: BMI screening of Florida school children has been performed since 2001. A 2009 MMWR report indicated that BMI screening activities among school-aged children in Florida did not meet sufficient quality measures regarding policies and guidelines, screening practices, staff training, equipment, and data management. It was concluded that to further understand the epidemiology of obesity in Florida, a more extensive BMI surveillance system would be needed, including a statewide repository of de-identified individual BMI screenings. It was also concluded that additional evaluations of the appropriateness of BMI screening activities in Florida school districts could help ensure the accuracy of statewide data.

## MOC statement on BMI measurement in schools:

### BMI Screening:

The NMDOH MOC does not endorse school-based BMI screening, consistent with the fact that neither the AAP nor the CDC endorse school-based BMI screening at this time. BMI screening in schools causes potential for student harm (e.g., stigma) without evidence of benefit. Costs can be sizeable, especially since screening generally entails measuring all children in the school or district and often occurs annually. Using limited resources (e.g., costs, staff time) for BMI screening also means that these resources are no longer available for other important and potentially more effective interventions (see "Evidence-based strategies" below.) If schools or school districts decide to undertake BMI screening programs, they should adhere to the safeguards identified by the CDC (see Appendix A) and plan to rigorously evaluate their program's effectiveness.

### BMI Surveillance:

The NMDOH MOC position on BMI measurement in the school setting for surveillance is that it might be appropriate if done well, if safeguards are in place, and if the costs are considered. Safeguards identified by the CDC should be in place for any BMI surveillance program implemented (see Appendix A). The risks associated with surveillance programs are minimized compared with screening programs because collected data is anonymous. Costs would also be relatively lower than for screening because a smaller sample of students could be measured, surveillance could be implemented bi- or triennially, and reports to parents would not be generated. It would still be important, however, to consider how resources invested in surveillance could potentially be utilized for other important priorities or interventions (see "Evidenced-based strategies" below.) Surveillance data collected from the school-age population would be useful to supplement existing weight status data available from other age groups. Surveillance data also could be used to monitor the aggregate effects of youth obesity prevention and control efforts across the state. (DOH school-based efforts related to BMI surveillance are summarized in Appendix B. For more information about these efforts, contact Patty Morris, PHD. Dr. Morris is listed in the contacts at the end of this guidance document.)

## Evidence-based strategies to address obesity in children and adolescents:

The NMDOH MOC **endorses** the ten school-based policies and practices identified by the CDC to promote physical activity and healthy eating. These have been identified as the school-based strategies most likely to improve obesity-related health behaviors of young people:

1. Address physical activity and nutrition through a Coordinated School Health Program (CSHP).
2. Designate a school health coordinator and maintain an active school health council.
3. Assess the school's health policies and programs and develop a plan for improvements.
4. Strengthen the school's nutrition and physical activity policies.
5. Implement a high-quality health promotion program for school staff.
6. Implement a high-quality course of study in health education.
7. Implement a high-quality course of study in physical education.
8. Increase opportunities for students to engage in physical activity.
9. Implement a quality school meals program.
10. Ensure that students have appealing, healthy choices in foods and beverages offered outside of the school meals program.

## Appendix A

The following safeguards identified by the CDC should be in place for any BMI measurement program implemented in the school setting:

- Introduce the program to school staff and community members and obtain parental consent.
- Train staff in administering the program (ideally, implementation will be led by a highly qualified staff member, such as a school nurse).
- Establish safeguards to protect student privacy.
- Obtain and use accurate equipment.
- Accurately calculate and interpret the data.
- Develop efficient data collection procedures.
- Avoid using BMI results to evaluate student or teacher performance.
- Regularly evaluate the program and its intended outcomes and unintended consequences.

## Appendix B

The New Mexico Department of Health is planning to launch a phased-in BMI surveillance system meeting the recommendations of the MOC. We are in the process of developing standardized protocols for the measurement of height and weight including the use of specific equipment. The Department has identified 16 school districts that are currently conducting BMI screening or surveillance in one or more schools. These districts will be asked to participate in a pilot conducted in the spring of 2010 to test the protocols for BMI surveillance for Kindergarten and third grade students. Eventually the Department would like to expand the BMI surveillance beyond these schools to be able to obtain regional and state population-based estimates which will enable the department to monitor changes over time, identify groups and geographical areas at greatest risk for obesity and provide information for targeting prevention efforts and evaluating the success of these efforts.

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