School-Based BMI Measurements

1. Purpose
   a. Surveillance
      - BMI of groups
      - Typically anonymous
      - Used to identify the percentage of students in a population who are at risk for weight-related problems.
      - Results from individual students not reported to parents.
      - Used to identify demographic or geographic subgroups at greatest risk of obesity to help target prevention and treatment programs.
      - Used to identify population trends & monitor outcomes of population interventions.
      - Widely accepted

   b. Screening
      - BMI of individuals
      - Used to identify individuals at risk for weight-related problems and provide parents with information to help them take action.
      - Can also be used to develop reports on populations.
      - Controversial - concerns about stigmatization, body image issues, pressure to engage in harmful weight loss practices, cost, follow up with health care provider.

Some states conduct both screening and surveillance

2. Effectiveness

*Does BMI screening lead to student and parental behavior change?*

Evaluation of 4 years of BMI screening in Arkansas:
- Increase in percent of parents who accurately classified their child as overweight.
- No increase in weight related teasing, concerns about weight, and dieting or diet pill use. Obese students were significantly more likely to be embarrassed by BMI measurements.

Evaluation of 3 school based screening programs:
- Parents do not consistently follow-up with a medical provider after receiving BMI results.
- Parents do not put students on diets with greater frequency than before BMI screening programs.
**Does surveillance or screening lead to decreased childhood obesity?**

Limited data on this

- In Arkansas- Childhood obesity rates have been stable over 7 years, while national rates have increased, however, this is a multi-component program involving BMI screening and many other school-based obesity initiatives.

- Adequate evidence shows that screening for obesity in children aged 6yrs and older and offering multi-component, moderate-to high-intensity behavioral interventions for obese children can effectively yield short-term (up to 12 months) improvements in weight (U.S. Preventive Services Task Force, 2010). This is for screening by clinicians- they do not specifically address school screening.

- Parental notification of BMI results in California schools did not result in a change in BMI compared to parents without notification.

3. **Recommendations from Expert Organizations**

- American Public Health Association & Institute of Medicine (IOM)- BMI measurements for surveillance, regardless of setting
- IOM also recommends schools measure annually each student’s weight & height and make information about BMI available to parents & students.
- American Academy of Pediatrics- recommends BMI calculated and plotted annually on all children/adolescents starting at age 2 by the child’s medical home. Schools should not initiate screening programs if resources for follow-up do not exist.
- U.S. Preventive Services Task Force- clinicians screen children 6 yrs and older for obesity and offer them or refer them to comprehensive, intensive behavioral interventions to promote improvement in weight status.
- The Health, Mental Health, and Safety Guidelines for Schools- schools should evaluate many factors before implementing school-based BMI: cost, follow-up efficiency of using schools as the screening site.
- Society for Nutrition Education: limit BMI for baseline and outcome evaluations of programs to prevent or treat obesity.

**References:**

