

## The skinny on BMI report cards

**S**chool-based body mass index (BMI) measurement programs that send parents report cards on their children's risk for obesity are gaining traction and sparking controversy as the newest weapon in the battle against the bulge, both in the United States and abroad.

But it's not yet clear whether or not the programs work, say obesity experts, who fear school screening may only serve to increase the stigma against overweight children or promote unhealthy dieting and attitudes about weight.

"I don't think that it's the role of the school to be the schoolyard bully. These six- and seven- and eight-year-olds who are going to get letters sent home, they're not suffering from an epidemic loss of willpower. We're not dealing with that here. We're dealing with a world where the default leads to weight gain," says Dr. Yoni Freedhoff, founder and medical director of the Bariatric Medical Institute in Ottawa, Ontario. "Simply putting it on the kids is putting them at increased risk for bullying and increased risk for pressures at home."

About a quarter of US states currently require schools or school districts to measure student heights and weights, and the vast majority of those states also require parent notification of the results (*J Sch Health* 2007;77:65-71). Arkansas implemented the country's first statewide BMI screening and surveillance program for all elementary and high school students in 2003 as part of a broader health initiative that also included changes to school nutrition policies.

Other states, including Florida, New York, Pennsylvania and Tennessee, subsequently followed suit, and the trend crossed international borders earlier this year when the government of Malaysia announced that it was implementing a school-based BMI screening program.

The aim is to identify students who are potentially at risk for weight-related problems and to prompt parents to act by seeking medical diagnosis and treatment or limiting television viewing time.



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**Some obesity experts worry that school-based body mass index programs may only serve to increase the stigma against overweight children or promote unhealthy dieting and attitudes about weight.**

"I think sometimes parents may be in denial, because no parent wants to hear negative things about their child, and research has shown parents of obese kids consistently underestimate

their risk," says Michelle Justus, program manager of the Arkansas Center for Health Improvement, which produces the state's BMI measurement results. "Part of it's the way our lifestyle

is now. The norm is getting more and more overweight, so at first look a child may not seem overweight compared to the other kids in his class.”

But little is known about the effects of BMI measurement programs on the weight and habits of students, although Justus says Arkansas’ data suggest progress is being made. While childhood obesity rates are rising nationally, the percentage of Arkansas students classified as obese has flat-lined at around 20% since the launch of the screening program, she says.

Awareness of weight issues have also improved. Some 21% of parents indicated their children had expressed concerns about their weight in 2008–2009, an increase of 2% over one year. Among students expressing concerns, 66% did so only after the BMI screening program was implemented ([www.rwjf.org/files/research/20090401arkansasyear5.pdf](http://www.rwjf.org/files/research/20090401arkansasyear5.pdf)). Meanwhile, the percentage of parents who accurately classified their child as overweight or at risk of becoming overweight increased to 53% from 40% after the first year of screening ([www.rwjf.org/files/research/20090401arkansasyear5.pdf](http://www.rwjf.org/files/research/20090401arkansasyear5.pdf)).

But the screening program was implemented with a spate of other school-based obesity initiatives, so it’s unclear what percentage of changes is attributable to any one measure, Justus says, adding that it’s also unclear whether parents and students are acting on their improved awareness about nutrition, or seeking follow-up care. An evaluation of the program found that parents neither consulted school nurses about their children’s BMIs, nor contacted family doctors for follow up care in significant numbers ([www.rwjf.org/files/research/20090401arkansasyear5.pdf](http://www.rwjf.org/files/research/20090401arkansasyear5.pdf)).

Nor had parents reported a reduction in the frequency with which they dined out or modified recipes to make healthier meals. Similarly, students have not reported substantial changes in their overall dietary habits, such as consumption of soda or junk food.

“We haven’t seen a really effective referral system in place that’s been able to link those students who are identified as underweight or overweight or obese from the school system to community health resources to make sure families get an accurate diagnosis and some evidence-based information about what the next steps are to make a healthy lifestyle,” says Allison Nihiser, a health scientist for the US Centers for Disease Control and Prevention (CDC).

In the absence of medical advice, parents might implement potentially harmful treatment plans, Freedhoff says. “If pointing out a kid has problems with their weight leads the parents to vilify the child and demonize food, then the program isn’t helpful. There’s no question that, seeing people in my office on a regular basis, they can relate back their struggle with food and weight to their mom or dad or doctor commenting on their ‘little belly’ or taking them to Weight Watchers when they were seven, eight, nine or 10 years old.”

Access to care is a problem, Justus concedes. “Our state is pretty poor in general, so most parents here have trouble taking the time off work to take the child to the doctor and do that follow-up. Or they may not have insurance and because the child may seem currently healthy to the parent, because they don’t have an immediate acute health condition, they won’t take them.”

There are also no guarantees under

the Arkansas program that parents actually receive the BMI data, she adds. Not every school can afford to pay postage to send the results home to parents and some schools opt to do so by sending the information home with students, which poses a risk to their privacy and well-being if a letter is snatched by bullies.

Because of such concerns, the Arkansas legislature reduced the frequency of BMI screening to every other year, starting in kindergarten and ending in Grade 10, Justus adds. “That being said, however, there’s been no evidence to suggest an increase in bullying, dieting, use of diet pills or embarrassment associated with BMI screening among students since the program began.”

Although the US Institute of Medicine recommends annual school-based BMI screening, other national organizations deliver incomplete grades on its merits. The CDC has concluded there’s insufficient evidence to recommend for or against such programs, while American Academy of Pediatrics maintains that annual BMI assessments should only be conducted by family physicians (*Pediatrics* 2009;124:S89-97).

Further evaluation is necessary, says Nihiser.

But it’s unlikely that governments and schools will wait for the research findings to become available, Freedhoff says. “Adopting these nonevidence based interventions could be a move of desperation. It could be, a decade from now, we’ll be seeing these types of things pop up all over Canada, because I’d say we’re about a decade behind in terms of weight compared to the United States. But we’re following a very comparable trajectory.”

— Lauren Vogel, *CMAJ*

*CMAJ* 2011. DOI:10.1503/cmaj.109-3927