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Introduction

- Many states have BMI reporting programs where student BMI is measured at school and reported to parents/guardians through a letter with resources for obesity prevention.¹
- Evidence demonstrates BMI reporting programs² do not have a significant impact on obesity.
- The present study has the following aims:
 1. To estimate the population impact on childhood obesity if BMI reporting were implemented by public schools in states where student BMI is currently measured at school but not reported to parents/guardians;
 2. To determine if these programs would be cost-effective;
 3. To assess for potential health disparities.

Methods

- Peer-reviewed literature and government reports were reviewed to collect information on activities and costs required to implement BMI reporting programs. Evidence of the intervention's effect on obesity was collected from Madsen et al.²
- The Childhood Obesity Intervention Cost-Effectiveness Study (CHOICES) microsimulation model⁴ estimated the intervention reach, costs, cases of childhood obesity prevented, and health care costs saved for students in grades 3-7, if implemented in public schools for the 15 states with BMI screening programs from 2020 to 2030.
- A secondary analysis assessed for health disparities by ethnicity. This analysis was exploratory since the 95% confidence intervals overlapped for the change in BMI z-score from Madsen et al.² for Hispanic (95% CI: -0.00 to 0.05) and non-Hispanic students (95% CI: -0.07 to 0.01).

Figure 1. Status of BMI reporting programs in the US¹

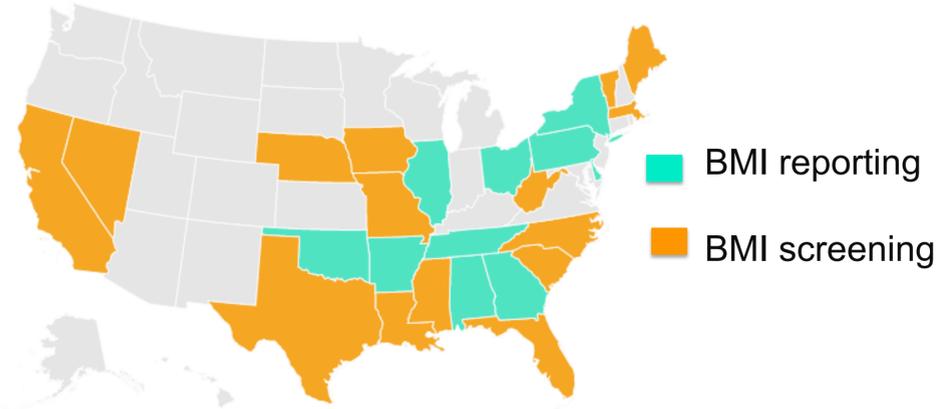


Table 1. Reach, costs and effect for the implementation of BMI reporting programs from 2020 to 2030

	Outcome	Mean (95% Uncertainty Interval [UI])
Reach 	Number of children reached over 10 years	20.7 million (20.2 mill to 21.2 mill)
	Cases of childhood obesity prevented over 10 years	-19,000 (-60,700 to 18,100)*
Effect 	Cases of childhood obesity prevented per 100,000 people over 10 years	-29 (-91 to 27)*
	Reduction in childhood obesity prevalence in 2030	-0.03% (-0.09% to 0.03%)*
Costs 	10-year implementation costs	\$108 million (\$105 mill to \$111 mill)
	Health care cost savings	-\$70.8 million (-\$220 mill to \$67.7 mill) [†]
	Net costs difference	\$179 million (\$40.6 mill to \$327 mill)

*Negative values means cases gained; [†]Negative values means costs incurred

Results

- BMI report cards were projected to reach over 7 million children from 2020 to 2030 and would not prevent any cases of childhood obesity (-19,000; 95% UI: -60,700 to 18,100). The intervention has an 85% likelihood of not preventing any cases of obesity.
- BMI report cards were projected to cost society \$179 million (95% UI: \$40.6 million to \$327 million).
- Results of the secondary analysis suggest a possible trend in worsening of obesity disparities by ethnicity.

Implications

- BMI reporting is not a cost-effective solution for preventing childhood obesity.
- Continued implementation may contribute to decreased weight satisfaction.²
- Future research and practice efforts should focus on how to de-implement this costly, ineffective, and potentially harmful intervention.

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