


Body Mass Index (BMI) Screening Letter Study – Phases I and II


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PRO Wellness Center
Champions for bringing healthy choices to life.

About Us

- We are committed to educating and inspiring youth and their families to eat well, engage in regular physical activity, and become *champions for bringing healthy choices to life*.
- We use evidence-based strategies for measurable and sustainable results.
- Our approach of **Prevention, Research and Outreach** provides schools and communities with educational programs, technical assistance, collaborative partnerships and access to proven wellness interventions.

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1 in 3 Children is Overweight or Obese

- 31.9% of US children and adolescents are overweight or obese.
- Pennsylvania is 20th most obese state in nation. (<http://healthamericans.org/reports/obesity2013>)

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“Fat Letters”

- In 2005, the IOM called on the federal government to help design and guide BMI-measurement programs in schools.
- Program design was two-fold: surveillance and screening.
- In PA, work began in 2004, full implementation in 2006/2007 school year.





Background

Growth screening enables schools to:

- Monitor growth and development patterns of students
- Notify parents/guardians of screening results.
- Recommendation to share findings with the student's health care provider.



Background

- School districts are required to submit aggregate data through the PA DOH.
- In Pennsylvania, approximately 33.32% of school-aged children measured overweight or obese.



STAND UP!




Improving the Letter

The Objective: Develop and test an effective BMI screening letter that would lead parents to tools and resources for making healthy lifestyle changes for their children.



Study Overview

- Phase I –
Qualitative study to revise letter
- Phase II –
Quantitative study to evaluate letter




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Phase I Methods

- Conducted structured interviews of parents (N=42) of students from Pennsylvania schools (N=6).
- Parents were asked to provide feedback on two different BMI notification letters – the standard and expert-revised letter.
- Qualitative analysis of the interviews guided further letter revisions.



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Appendix D

Sample Parent Care Plan Notification
School Screening Program
2012-2013 School Year

Dear Parent/Guardian:

During the 2012-2013 school year, your child was screened for overweight and obesity. The results of the screening are as follows:

Screening Results: Your child is **Overweight**.

Next Steps: Your child's BMI is in the overweight range. We encourage you to discuss this with your child's healthcare provider. We also encourage you to discuss this with your child's teacher and the school nurse. We will continue to monitor your child's weight status throughout the school year.

Resources: For more information, please visit the following website: www.pennstate.edu/health

Sincerely,
Deborah Ligon

SAMPLE Revised Letter to Parents for BMI Screening
2012-2013 School Year
Elementary School

Dear Parent/Guardian:

This letter is to inform you of the results of your child's BMI screening. Your child's BMI is in the overweight range. We encourage you to discuss this with your child's healthcare provider. We also encourage you to discuss this with your child's teacher and the school nurse. We will continue to monitor your child's weight status throughout the school year.

OVERWEIGHT (BMI) RISK INFORMATION:

For every 1000 children, there are 55 children who weigh less than your child.

Screening Result	Number of Children	Percentage of Children
Underweight	10	1%
Healthy Weight	100	10%
Overweight	80	8%
Obese	10	1%

Your child's height is 5'0". His/her weight is 150 lbs.


There are some suggestions to help your child eat well and get enough physical activity:

- Eat a variety of fruits and vegetables.
- Drink water instead of sugary drinks.
- Limit screen time.
- Encourage your child to be active every day.
- Schedule regular checkups for health care providers to help monitor your child.

For more information, please visit the following website: www.pennstate.edu/health

Sincerely,
Deborah Ligon

REVISOR LETTER



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Phase I Results

A total of 300 letters were sent, with 42 calls received and 37 interviews completed with parents, for a response rate of 0.12.

Parental Characteristics	
Female	93%
Average Age	44
Age of Child	62% middle and high-school
Child's BMI	43% overweight or obese

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SCHOOL INFORMATION

(Today's Date)

Dear Parent/Guardian:

On (insert concerning date), (Child's First Name) was weighed and measured in school and his/her BMI (Body Mass Index) was recorded. BMI for age percentiles was calculated using your child's BMI and it was compared to other children who are of the same age and sex. These measurements are used to assess the weight categories that may lead to health problems. Being normal, thinking a child grows into them is more important than a one-time measurement and it is necessary for all children, regardless of BMI, to be active and eat healthy.

(Child's First Name)'s Results:			
(Child's First Name)'s BMI for age percentile is XX%.			
Underweight	Healthy Weight	Overweight	Obese
0% to 4%	5% to 84%	85% to 94%	95% to 100%
👤	👤	👤	👤

(Child's First Name)'s height is X.X.X in. and weight is XXX lbs.

If (Child's First Name) is not in the healthy weight category, it is recommended that you schedule a visit with his/her health care provider and share these results.

What are the health risks of being overweight or obese?

- Increased risk of being overweight or obese as an adult
- Increased risk for problems such as diabetes, heart disease, asthma, high blood pressure and poor self-esteem.

Here are some suggestions for your family to work toward or maintain a healthy weight.

- Get up, get moving and just come home
- Serve more servings of fruits and vegetables every day
- Eat a variety of fruits and vegetables every day
- For more tips visit www.healthymove.com/parents/faq

For more information about BMI, visit www.nhlbi.nih.gov/health/monitoring/bmi or contact the School Nurse.

Sincerely,

Name of School Nurse
Phone: (717) 335-5333

Participation requires schools to report BMI for all children in the same way they report vision and hearing screenings. BMI for age percentiles shows how your child's weight compares to that of other children of the same age and sex.

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Phase II Study Design

- Randomized controlled trial involving parents of students in 16 Pennsylvania schools.
- In an attempt to balance across groups, schools were matched in distribution:
 - Free and reduced lunch
 - Grades served
 - Number of students

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Phase II Methods

- Schools were assigned to distribute the standard school letter (N=8) or the expert-revised letter (N=8) for BMI notification.
- Letters distributed (N=8,624)
 - Standard Letter (N=105)
 - Expert-revised BMI Letter (N=280)
- Parents (N=385) completed surveys to assess their intention and predicted actions based on the letters.



Phase II Results

Characteristics	Standard BMI Letter (N=105)	Revised BMI Letter (N=280)
Student Gender, Female (%)	50 (48%)	135 (48%)
Student Grade (%)		
- Elementary (K-5)	13 (12%)	30 (11%)
- Middle School (6-8)	39 (37%)	215 (77%)
- High School (9-12)	53 (50%)	35 (12%)
BMI Percentile, mean (SD)	57.8 (31.2)	60.2 (29.9)
Parental gender, Female (%)	86 (82%)	232 (83%)
Parent's BMI, mean (SD)	27.2 (6.0)	25.9 (5.9)
Caucasian (%)	94 (90%)	248 (89%)
Parent's educational status		
- College graduate	58 (55%)	215 (77%)



Phase II Results

Among parents of overweight or obese children, significantly more recipients of the revised letter intend to take action.

Parental Responses	Standard BMI Letter (N=29)	Revised BMI Letter (N=68)	P-value
Chose at least one intended action	13 (45%)	46 (68%)	0.04
Chose action to improve energy balance (either energy in or energy out)	11 (38%)	42 (62%)	0.03

Unadjusted logistic regression model for outcomes in overweight children



Discussion

Strengths

- This study marks the first attempt to use parent feedback to revise the BMI screening letter.
- The Result: An improved BMI screening letter tool for schools.

Limitations

- A larger sample would have shown greater effects.

Challenges

- Attitudes about the "fat letters" lead the public to miss the mark that BMI screening letters are an awareness tool and interfere with open discussions regarding healthy weight and chronic disease prevention.



Next Steps

- Completing manuscripts to submit for publication.
- Partnering with the PA DOH for their implementation of the new letter.
- Plan a study to evaluate electronic notification of revised letter (e-BMI) compared to mailing of letter
 - 1st and 6th month follow-up on parental changes in attitude and intent to change.
 - Allows for use of color and quick links.



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Questions?

