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

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## **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 20<sup>th</sup> most obese state in nation. (http://healthyamericans.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.

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## **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.

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## **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.

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# 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. PENNSTATE HERSHEY Champions for bringing healthy choices to life.

## **Study Overview**

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

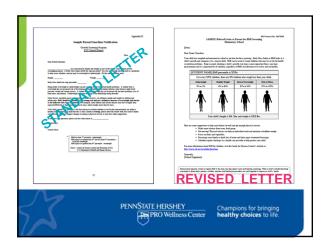
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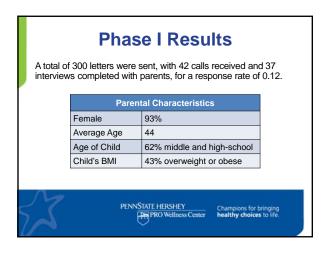
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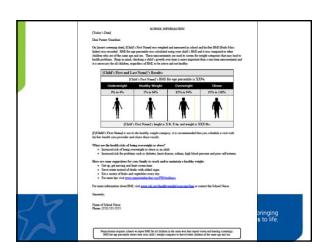
## **Phase I Methods**

- 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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## 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 PENNSTATE HERSHEY PRO Wellness Center Champons for bringing healthy choices to life

## **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.

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## **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%)	

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## **Phase II Results**

Among parents of <u>overweight or obese children</u>, 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

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## **Discussion** This study marks the first attempt to use parent feedback to revise the The Result: An improved BMI screening letter tool for schools. · A larger sample would have shown greater effects. 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. PENNSTATE HERSHEY PRO Wellness Center

## **Next Steps**

· Completing manuscripts to submit for publication.

Strengths

Challenges

- 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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