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# MATCH Motivating Adolescents with Technology to CHOOSE Health

## The Problem

- Childhood obesity has quadrupled in adolescents over the past 30 years.<sup>1</sup>
- Extreme Obesity (>=99%tile) in US teens has increased 9-fold from 1971 (0.8%) to 2010  $(4.5\%)^2$
- Extreme Obesity rates in Eastern NC (9.3%) were double the national average, according to a study of 2,633 seventh graders.<sup>3</sup>

The problem of childhood obesity 1971 to 2014 Percent of children at each BMI percentile  $\ge 85^2$ 



<sup>\*</sup> BMI = Body Mass Index

- If overweight and obese children become high-end overweight adults (BMI 28+)<sup>4</sup> :
  - ♦ By early 40's, each child will cost \$27K in medical costs and lost productivity
  - ♦ By early 60's, each child will cost \$210K in medical costs and lost productivity

# MATCH is the Solution

Motivating Adolescents with Technology to CHOOSE Health<sup>™</sup> (MATCH) is the most successful school-based childhood obesity intervention in the literature. MATCH empowers students to make healthy choices for eating and physical activity through lessons and activities taught in Healthful Living, Science, Math, Language Arts, and Social Studies.



Students observe density of sugar-sweetened beverages.

Created by a teacher to work within the existing school day, MATCH has shown consistent results to improve weight status in over 5,300 seventh graders over the past eight years. MATCH is designed to meet educational objectives while producing wellness outcomes simultaneously.

> MATCH is the most successful school-based childhood obesity intervention in the literature.

### **MATCH Produces Results!**

MATCH Success Rates (decreased mean BMI\* Z-Score) for All Overweight by Cohort Year



Two long-term follow-up studies<sup>5, 6</sup> of MATCH participants at age 17 years have shown a 15% shift from the overweight to healthy weight category. Development of new cases of obesity between 7th and 11th grade were cut in half, from 39% in those without MATCH to 17% in those in the program.

What is the meaning of these changes by 11th grade? If students have improved their weight by age 17 years, they are very likely to maintain this healthy weight into adulthood. The NC Institute of Medicine Task Force on Rural Health has just published recommendations that NC consider 'MATCH in schools' as policy to improve obesity.7

Benefiting from over \$2 million in support through six grants from private foundations, MATCH has expanded to 17 schools in North and South Carolina. Ninety-four percent of teachers surveyed say MATCH lessons are easy to prepare and would teach MATCH again.

MATCH students' average a 24% increase in number of laps on PACER Aerobic Fitness Test. Aerobic Fitness, measured by the PACER Test, is the best independent predictor of academic performance in 3rd to 8th grade.<sup>8</sup> Overweight and obese students increase number of laps by 32% and 34% respectively.

> If MATCH were implemented statewide in NC with similar results, it could SAVE NC Medicaid up to \$330 million over 5 years.

#### \* BMI = Body Mass Index

#### MATCH can SAVE Millions

An independent report by an RTI economist estimated that if MATCH were implemented statewide in NC with similar results over a five year period, it could save NC Medicaid up to \$330 million.<sup>9</sup> The 2012 "Tipping the Scales Report" estimated that a 3% decrease in adult prevalence of overweight in NC would save \$3 billion to employers.<sup>4</sup> MATCH has averaged a 15% decrease. These studies support the need for immediate expansion of MATCH to cash in on the SAVINGS!



Students participating in PACER Tests

#### Testimonials

"...I have lost a total of 10 pounds so far.... The MATCH program has really impacted my family. I have gotten them to start eating healthy foods, stop eating fast and fried foods everyday and making them do aerobic dances." -BH

"...For me, MATCH is a way of life. It has opened my eyes as an educator and a person. By teaching MATCH, I changed the way I eat and how much I exercise. I love the program and it has truly changed my way of life." -WS

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- 3. Unpublished Data from 2013-2014 School Years from MATCH Implementations
- 4. Tipping the Scales Report, BeActive NC 2012 www.ncpreventionpartners.org 5. Lazorick, S., et al. Childhood Obesity, 2014;10(1):25-33. DOI:
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- 6. Lazorick, S., et al. data in preparation for publication
- 7. North Carolina Rural Health Action Plan: A Report of the NCIOM Task Force
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- 9. RTI economist report, 2009, available upon request





Foundation

