

HEALTHY WEIGHT OF VINEYARD SCHOOL CHILDREN

Assessing the impact of BMI letters

UMass Medical School Rural Health Scholars in collaboration with Mass in Motion
Kathryn Bailey, Molly Cook, Rachel Erdil, Jacob M. Koshy, Jeremy Malin RN, and Suzanne Cashman PhD



University of
Massachusetts
Medical School



Objectives

1. Evaluate use and utility of Body Mass Index (BMI) letters
2. Identify existing school and community resources to promote healthy weight among school children
3. Develop recommendations for Mass in Motion to improve health of school children on Martha's Vineyard

Background

- One third of US children are overweight/obese, and 70% will remain overweight/obese as adults^{1,2}
- In 2009, the MA Department of Public Health mandated that schools calculate BMI of children in grades 1, 4, 7, and 10; communicate the results to parents; and report them to MA DPH³
- On Oct 16, 2013 MA eliminated mandate to communicate results of BMI screening to parents⁴
- Year-round population on Martha's Vineyard is 17,000⁵
- Cost of housing on MV is two times the state average, while per capita income is less than the state average⁵

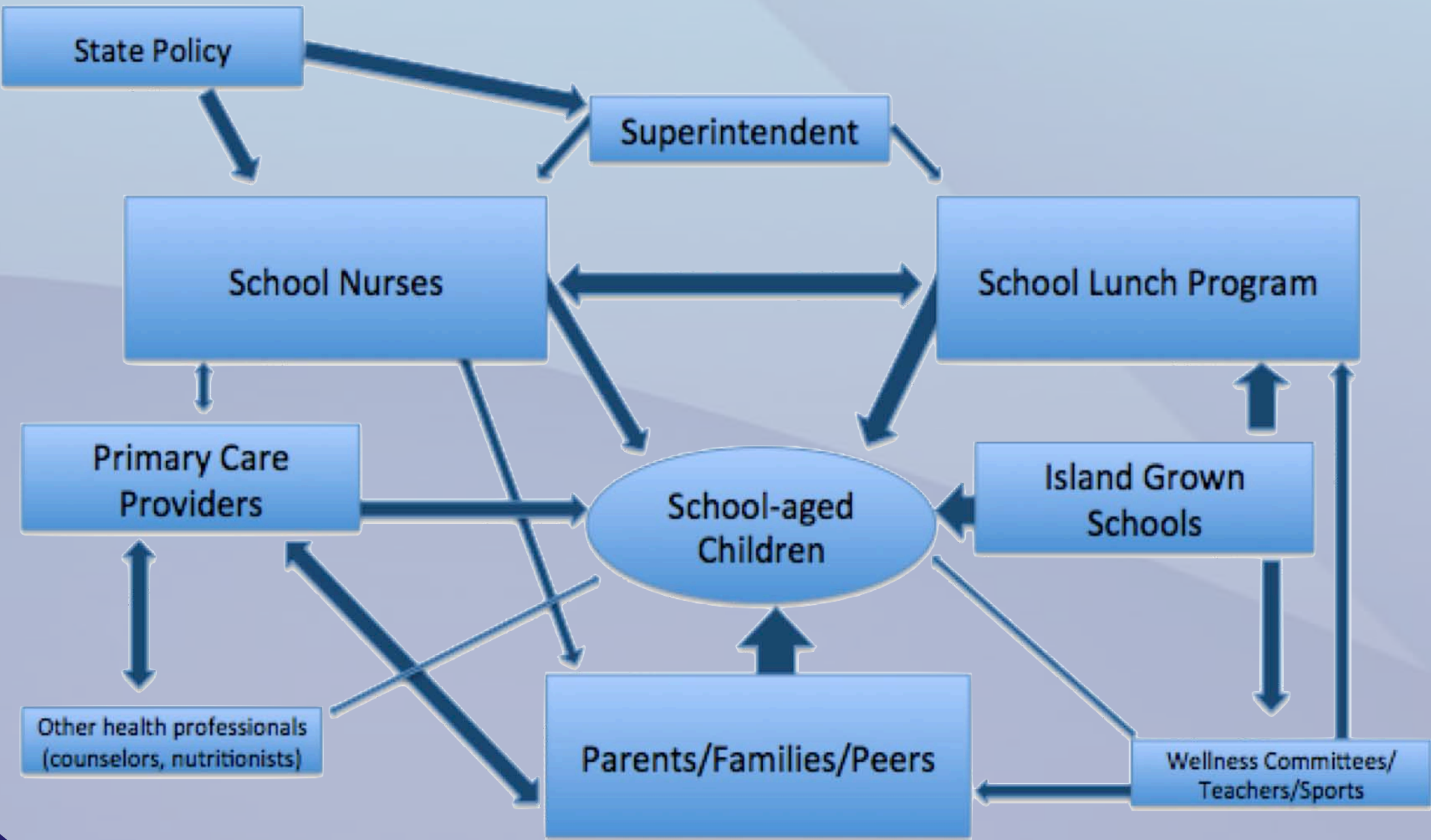
Methods

- Visited all schools on Martha's Vineyard
- Interviewed school nurses, teachers, cafeteria staff, Superintendent, parents, 40+ high school students, directors of afterschool programs, preschool directors, physicians, dietitians, Island Grown Schools staff
- Observed school lunchtime
- Conducted a robust literature search

Findings

- Island Grown Schools gleaning program and school gardens are already well integrated into school curricula
- High participation in healthy lunch program at elementary schools
- Free fruit available all day at elementary schools
- Eliminated unhealthy snacks in most elementary schools
- Safe bike access to some schools ("Safe Routes to School")
- Lack of community resources (e.g. access to affordable nutrition counseling) for follow up to BMI letters
- High School cafeteria is run by a corporation and offers lower quality food than the elementary schools; fewer students participate in school lunch program
- Lack of cultural competency training for school and health professionals

Interprofessional Network



Recommendations

1. Support the school nurses in developing an island-wide policy for measuring height and weight
2. Consider developing island-wide wellness goals
3. Investigate increasing access to a nutritionist: community-based, school-based, or monthly visiting/telemedicine consult from Partners Healthcare
4. Raise quality of food at MV Regional High School to match that of island elementary schools
5. Increase availability of healthy snacks at both schools and afterschool programs
6. Increase utilization of the individual and family scholarships at the YMCA
7. Improve nutrition education for families
8. Increase activity throughout the school day

These recommendations were developed using both the American Public Health Association goals for reducing obesity and other best practice models.

Mass in Motion of Martha's Vineyard has formed a task force to assess and act on these recommendations. The first community meeting will take place on November 8, 2013.

References

1. Centers for Disease Control and Prevention. (2013, July 10). *Adolescent and School Health: Childhood Obesity Facts*. Retrieved October 23, 2013, from <http://www.cdc.gov/healthyyouth/obesity/facts.htm>
2. Finkelstein EA, DiBonaventura Md, Burgess SM, Hale BC. The costs of obesity in the workplace. *J Occup Environ Med*. 2010 Oct;52(10):971-6.
3. MA Department of Public Health. (2009). *BMI Screening Guidelines for Schools*.
4. Lazar, Kay. "State scraps controversial student obesity letters". *Boston Globe* 16 October 2013
5. U.S. Census Bureau. (2013, June 27). *State & county Quickfacts: Dukes County, M.A.* Retrieved October 21, 2013, from <http://quickfacts.census.gov>

BMI Data Comparison

	MV*	MA*	USA**
Students screened	593	205,975	2,939
Overweight	18.9%	16.7%	16.0%
Obese	15.0%	15.7%	18.7%
Overweight or Obese	33.9%	32.3%	34.7%

*Preliminary Results from Body Mass Index Screening in Massachusetts Public School Districts, 2011
**Limited sample from: Data from the National Health and Nutrition Examination Survey, 2007-2008



Left: Free fruit bowl available all day in elementary schools
Right: Freezer at Tisbury Elementary School filled with gleaned produce



Authors presenting study findings to the community.
Left to right: Jeremy, Rachel, Jacob, Kathryn, Molly