



Group Obesity Care in SBHC for Youth of Color

Are they sustainable and effective?

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Objectives

- Discuss the impact on youth who participate in group obesity health education and medical visits, drawn from mixed methods data analysis of 3 projects over 18 months
 - Assess the benefits of linking individual interventions with population level interventions to promote healthy eating and exercise
 - Evaluate the benefits of an academic-community partnership to support SBHC group obesity interventions
- 

Obesity: The Problem in Context

- Complex and Persistent
- General Concordance (parent-child)
- High poverty neighborhoods lack:
 - Access to affordable fresh foods
 - Safe and affordable exercise opportunities
- Most health care programs addressing this issue are high intensity, not sustainable without grants

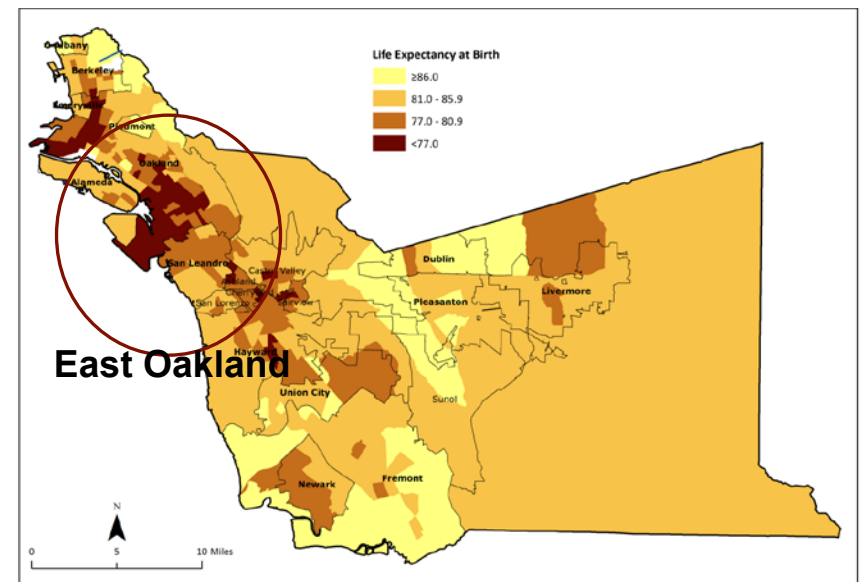


Health Inequities by Place

Indicator	East Oakland	Alameda County	California
Obesity rates	48%	34%	30%
Overall poor health	13%	5%	7%
Physically active	12%	15%	18%
Nearby park/playground viewed as safe during the day	50%	88%	90%

Multiple BMI screens in East/West Oakland middle schools show 50% of children overweight or obese

Life Expectancy by Census Tract – Alameda County



Source: CAPE, with data from Alameda County vital statistics files 2006-2010.

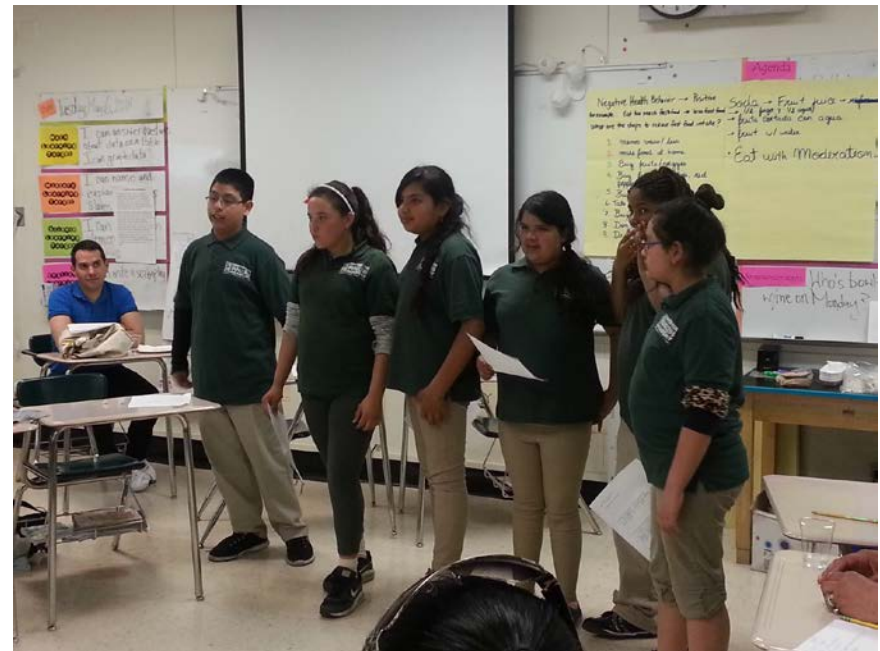
The UC San Francisco-Alameda County Academic Community Partnership

- Originally funded through UCSF Elev8 nursing/dental grant
- UCSF Nursing students & faculty assisted with:
 - Program design & implementation (all)
 - BMI screening & QI projects (all)
 - Funding for student/parent stipends & food (UFSA)
 - Gender- and culture-specific support groups (Roosevelt)
 - IRB approval for pre- post surveys and focus groups



The Group Model Framework

- Inspiration from Centering Pregnancy and group diabetes visit models
- Students have the ability to work with multidisciplinary team of providers
- School context- groups of students (classes) already exist!
- Population health
- Financially sustainable
- Potential to include community partners
- Learning about nutrition is more engaging when you do it as a group!



Three Schools, Three Projects:

United For Success Academy

11 week intervention
Met 1x/wk through afterschool program
targeted at 6th grade

Recruitment:

Presentation to 6th graders in the after-school program.

Integrated Medical Visits:

Each participant had at least 5 visits with provider

Other Key Components:

*Partnered with County Nutrition Department to help facilitate 3 family nights as well as group sessions

Havenscourt

9 week intervention
Met 2xs/wk as an alternative to PE targeted at 6th-8th grade

Recruitment:

School-wide Screening

Integrated Medical Visits:

Each participant had at least 9 visits with provider

Other Key Components:

* Partnered with Destiny Arts to facilitate physical component of program 1x/wk

Roosevelt MS (Year One)

6 week intervention
Met 4 days/wk as Health Elective class
targeted at 6th-8th grade

Recruitment:

Targeted by identifying students most in need from existing medical patients??

Integrated Medical Visits:

Each participant had 2-4 visits with the provider

Other Key Components:

*3 family engagement educational nights
*Youth lead wellness activities (school health fair)
*Incorporated school staff wellness

*All 3 sites received evaluation assistance through UCSF in terms of analysis of biometric data, pre/post surveys and facilitation of focus groups

Curriculum Themes

Health Center	# of Sessions	Nutrition	Physical Activity	Emotional /Problem Solving	Family Component	Sedentary Behavior
Roosevelt MS	24 (30 mins)	X	X weekly	X weekly	3 sessions	-
Havenscourt	18 (55mins)	X	X weekly	X	1 session	-
UFSA	11 (55mins)	X	-	X	3 sessions	-

- All 3 sites integrated a multidisciplinary team that together implemented the program:
 - * Medical Provider
 - * Medical Assistant
 - * Health Educator
 - * Behavioral Health Clinicians
 - * Community Partners
- Fun and engaging lessons was the key to successful program implementation

A closer look: United for Success Staff Roles

Health Educator

- Build partnerships with schools and CBOs
- Student recruitment and follow-up
- Prepare and co-facilitate lessons
- Be the key person of contact for students

Front Desk

- Collect student consents
- Register and verify insurance
- Make referrals to eligibility specialist
- Check-in students
- Keep track of participants who will be checked in for a medical visit

Medical Assistant

- Welcome students
- Take vitals
- Document HPI in the session number, learning objectives and activities of the day
- Participate if possible in group

Medical Provider

- Co-facilitate
- Provide 1:1 medical care
- Coordinate care with parents and PCP for obesity work-up,
- Build individual goals with students
- Document and bill

A closer look: United for Success Curriculum

Session #	Topic
1	Welcome-Introduction to the Program
2	My Plate: The 5 Food Groups
3	The Importance of Breakfast
4	Making Smart Choices
5	Nutrition Label Reading- Making Better Beverage Choices
6	Nutrition Label Detective
7	Corner Store Fieldtrip
8	Body Image
9	Curriculum Review
10	Closing-Celebration!



A closer look: Havenscourt Centering Wellness

- Campus-wide screening used to recruit participants :
 - * Total of 6 groups in 2013-2014
 - * 55-64% were new SBHC clients
 - * Parent involvement challenging
- Groups repeated in 2014-2015
 - * Trauma treatment (CBITS) groups also offered- some overlap
 - * Youth from original year tracked through year 2
 - small BMI changes in those followed most often



A closer look: Roosevelt, two models

YEAR 1 - *TARGETED APPROACH*

- Wellness Boost Class
- Parent Nutrition Ed. Nights
- Integrated Medical Visit model
- Youth led Wellness Wednesdays
- School-wide Health Fair

YEAR 2- *CAMPUS WIDE P.H. APPROACH*

For Youth:

- Nutrition Education Series in New Health Class
- Wellness Screens
- Spa Water Wednesdays
- Peer Health Educators

For Staff:

- Monthly Staff Wellness Breakfasts
- Restorative Justice for Staff
- Yoga & Mindfulness on “Free & Fit Fridays”



A closer look: Roosevelt, Curriculum overview

YEAR 1 - TARGETED APPROACH



SAMPLE ACTIVITY –TARGETS



A closer look: UFSA Program Cost/Income



Personnel	Rate	Hours	Total
Health Educator	\$20/hr	50	\$1,000
Medical/Program Assistant	\$15/hr	20	\$300
Nutritionist	\$30/hr	20	\$600
Provider	\$45/hr	20	\$900
Incentives			\$200
Supplies			\$850
TOTAL			\$3850

Actual billing revenue = \$3449

Potential revenue (if all children covered by Medicaid) = \$15,200

Targets: the Bigger Picture

<http://youtu.be/houn2MxVstw>



WARNING

The suggestions that follow are best practices from AAP & from current local practice BUT

- Vary from Plan to Plan and from County to County

Coding is like foraging...



How did we bill for groups?

First step: diagnosis coding

- Initial codes assigned by MD/NP/PA
- American Academy of Pediatrics recommend the most serious codes first
 - ICD-10 codes are extremely specific (switch 10/2015)
 - The diagnosis is directly linked to procedures, medications, laboratory tests, etc.
 - There is no limit to the number of diagnoses that can be reported.

Choosing a Diagnosis: Drop Down Menu

Body mass index (BMI) pediatric, 5th percentil...	BMI pediatric, 5th percentile to less t...
Body mass index (BMI) pediatric, 85th percent...	BMI pediatric, 85% to less than 95th ...
Body mass index (BMI) pediatric, greater than ...	BMI pediatric, greater than or equal ...
Body mass index (BMI) pediatric, less than 5th...	BMI pediatric, less than 5th percentil...
Dietary counseling and surveillance Z71.3	Dietary counseling and surveillance
Morbid (severe) obesity due to excess calories...	Morbid (severe) obesity due to exces...
Obesity, unspecified E66.9	Obesity, unspecified
Overweight E66.3	Overweight
Underweight R63.6	Underweight

Overweight = BMI >85th%, < 95th% for age and gender

Obese = BMI ≥ 95th% for age and gender

Step 2: Time Evaluation and Management [E/M]



CPT Code	99212	99213	99214	99215
History	Problem Focused CC Brief HPI	Expanded problem- focused CC Brief HPI Prob Pert Review of Systems (ROS)	Detailed CC Ext. HPI Ext. ROS Pertinent PSFH	Comprehensive CC Ext. HPI Complete ROS Complete PFSH
Physical Exam	Problem-Focused	Expanded problem- focused	Detailed	Comprehensive
Medical Decision Making	Straightforward	Low complexity	Moderate complexity	High complexity
Time*	10 min.	15 min.	25 min.	40 min.

If you have a clickable history box, use it!

Will prepopulate ROS – try “obesity” as HPI – here is Next Gen example

Information on this HPI that has been pre-populated from another HPI must be changed on the original HPI to prevent conflicting documentation.

Concern:

Onset:  

Severity of symptoms:
 Mild
 Moderate
 Severe
 Incapacitating

Status:
 Maintaining weight
 Losing weight
 Gaining weight

Risk Factors:
 None
 Annual weight gain of > 2 lbs (1kg)/year
 Ethnicity
 Family history of obesity
 High fat diet

Associated Conditions:
 None
 Cushing's disease
 Diabetes mellitus
 Harassment by peers
 Hyperlipidemia

Aggravated By:
No Yes
 High fat diet
 Lack of exercise
 Medications
 Poor mobility

Relieved By:
No Yes
 Diet(s)
 Exercise
 Medication
 Surgery

Other positives:

Other negatives:

Other positives: Other negatives:

Associated Symptoms/Pertinent Negatives:
 No associated symptoms
 No pertinent negatives
 All others negative

Pos	Neg Pos	Neg Pos	Neg Pos	Other associated symptoms:
<input type="radio"/> Abdominal pain	<input type="radio"/> Cold intolerance	<input type="radio"/> Generalized weakness	<input type="radio"/> Low self-esteem	<input type="text"/>
<input type="radio"/> Acne	<input type="radio"/> Constipation	<input type="radio"/> Hair loss	<input type="radio"/> Oligomenorrhea	Other pertinent negatives:
<input type="radio"/> Amenorrhea	<input type="radio"/> Depression	<input type="radio"/> Headache	<input type="radio"/> Paresthesias	<input type="text"/>
<input type="radio"/> Anhidrosis	<input type="radio"/> Delayed development	<input type="radio"/> Hirsutism	<input type="radio"/> Striae	
<input type="radio"/> Anorexia	<input type="radio"/> Facial plethora	<input type="radio"/> Hoarseness	<input type="radio"/> Vision changes	
<input type="radio"/> Anxiety	<input type="radio"/> Fatigue	<input type="radio"/> Lethargy		

Relevant Findings:
Computer/television time: hr/week

Comments:

Save & Close Cancel

Comprehensive Physical Exam

System	Possible Findings	Implications
Skin	Acanthosis nigricans Acne Hirsutism Cutting Calluses on knuckles	Insulin Resistance Androgenization (girls)/ PCOS Self-harm Bulimia
HEENT	Caries Enlarged tonsils Tooth erosion, mouth sores	Dental referral Sleep apnea Biulimia
Respiratory	Decreased breath sounds Wheeze	Restrictive lung function Asthma
GI	Epigastric tenderness Liver enlargement/ tenderness, + Murphy	Reflux/gastritis Fatty liver GB disease

Physical Exam

System	Possible Findings	Implications
Musculoskeletal	Joint pains Bowed tibia Limp, decreased hip ROM Hunched back	Strain on joints Blount's disease SCFE Kyphosis
GU	Early/delayed puberty Abnormally small;/arge genitalia	Syndromes related to obesity, Disorders of sexual development
Neuro	Headache, visual disturbance, bulging optic discs	Pseudotumor cerebri (or idiopathic intracranial hypertension)

HPI/ROS/Physical Exam: Skin

CC: brownish velvety discoloration on skin around neck

HPI: started 1 year ago, unresponsive to hygiene, lotions, painless, nonpruritic notes that younger sibling has something similar

PMH – has been overweight most of life, recent gain of about 20 pounds, told had fatty liver last year.

FMH – mother, MGM with Type 2 DM managed with pills

ROS (Skin) – no itching, burning, pain, bleeding, sores

PE – well appearing engaging early adolescent in NAD

SKIN: velvety brown plaque around neck, under axillae, scattered closed comedones on forehead.

HPI/ROS/Physical Exam: Skin

Diagnosis:

- Obesity, unspecified E66.9
- Acanthosis L83
- Acne L 70.0

Plan:

(if not already done) --- Fasting labs to include, glucose, HgbA1c, vitamin D –
may do Liver panel, Lipid panel if not already done
Offered acne tx, declines

Counseling:

[topic of the week for group]

CPT code:

99212 (probably)



Description of Guidelines

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SUPPLEMENT ARTICLE

Expert Panel on Integrated Guidelines for Cardiovascular Health and Risk Reduction in Children and Adolescents: Summary Report

EXPERT PANEL ON INTEGRATED GUIDELINES FOR CARDIOVASCULAR HEALTH AND RISK REDUCTION IN CHILDREN AND ADOLESCENTS

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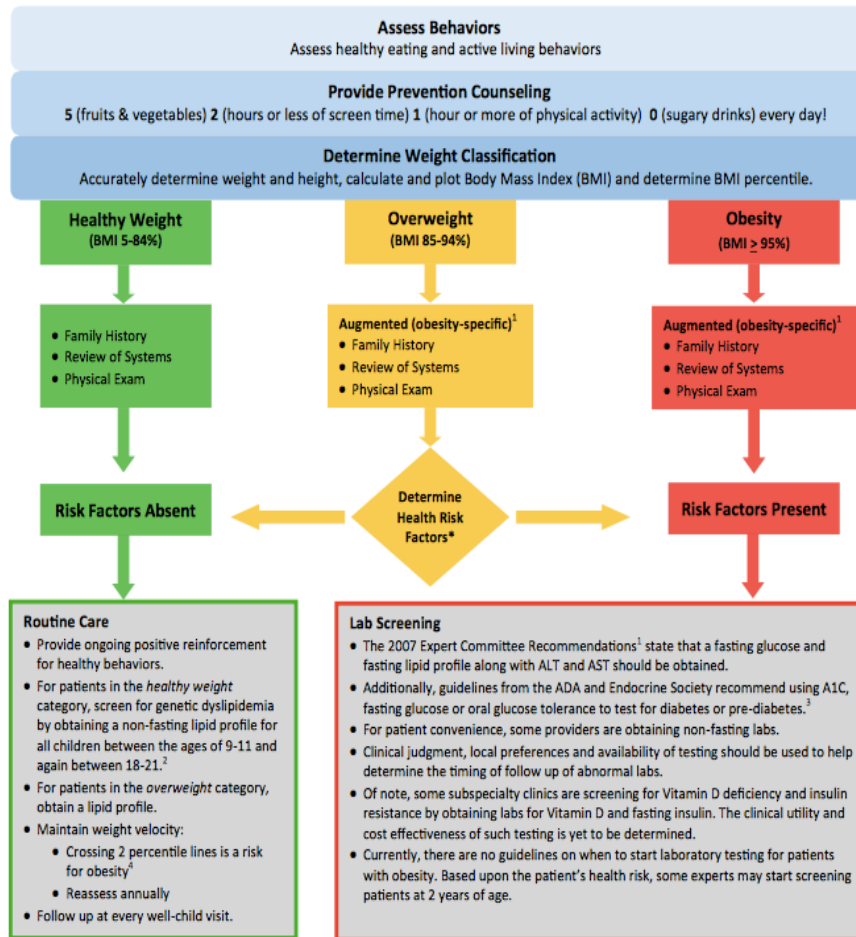
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SUPPLEMENT ARTICLE

Medical Best Practices: AAP Guidelines

Algorithm for the Assessment and Management of Childhood Obesity in Patients 2 Years and Older

This algorithm is based on the 2007 Expert Committee Recommendations,¹ new evidence and promising practices.



BMI >85%

Fasting blood sugar or
A1C

Fasting lipid panel

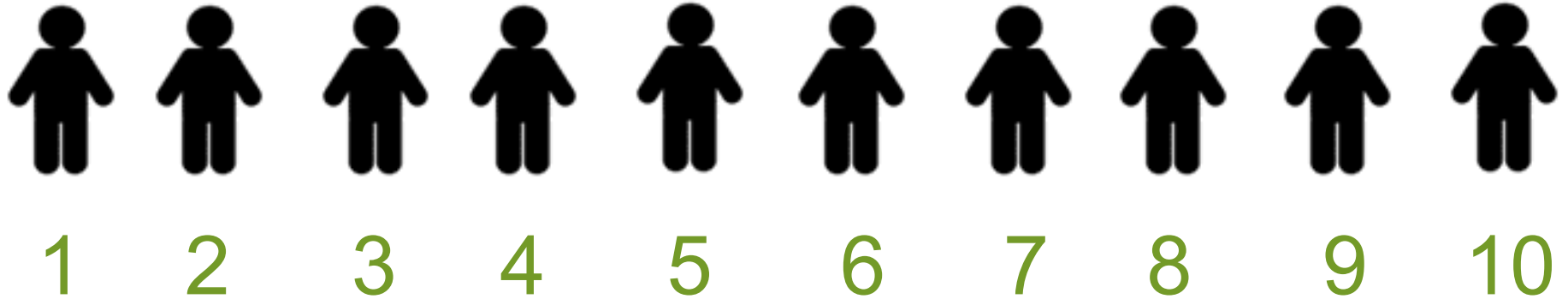
ALT/AST

Consider RUQ US

Goals: Positive behavior
change, BMI reduction

Frequency of visits: every 2-4
weeks, reassess frequency
after 3-6 months

Bill for patient visits every other week



Participants 1-5
are seen by the medical provider on
odd weeks:

- Week 1
- Week 3
- Week 5
- Week 7
- Week 9

Participants 6-10
are seen by the medical provider on
even weeks:

- Week 2
- Week 4
- Week 6
- Week 8
- Week 10



A closer look: Roosevelt, two models - Data

Improved Youth's Nutrition:

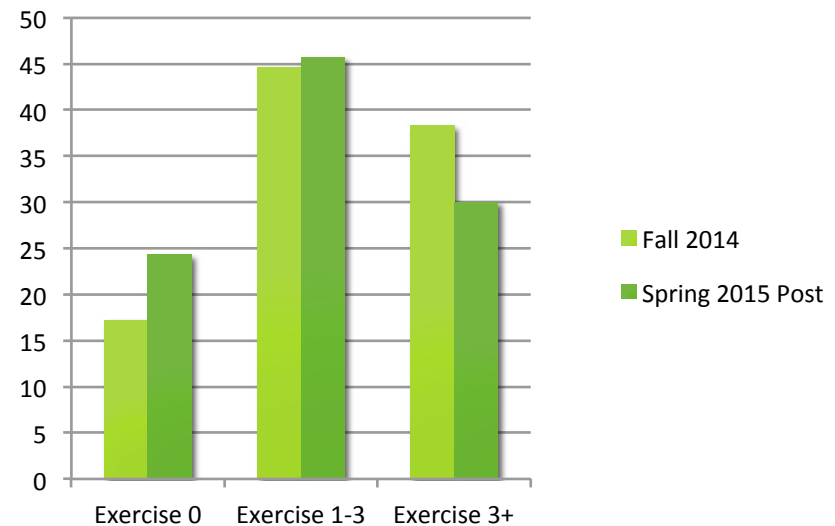
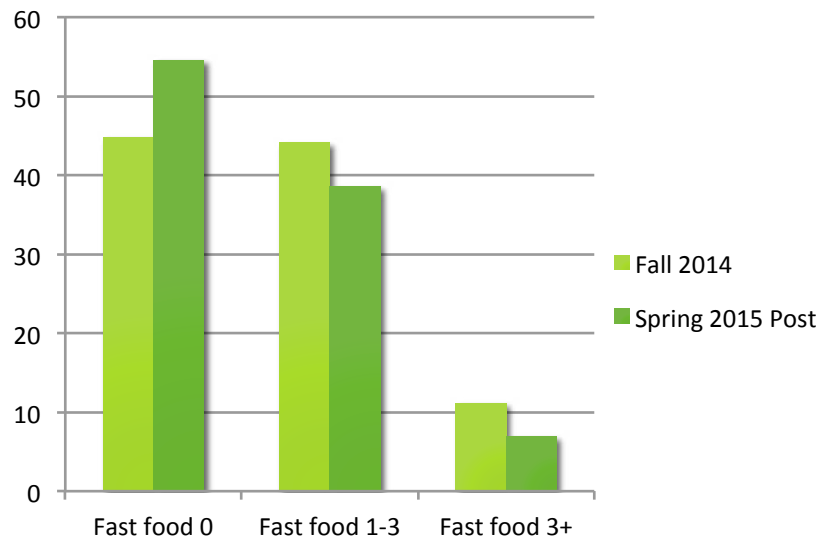
Targeted Approach – Year #1

- I can choose fruit of veg for snack - 27% to 56%
- Reduced Soda Consumption

Campus Wide Public Health Approach – Year #2

- Reduced consumption of Fast Food from 49% to 32%
- Increased consumption of 5 or more raw fruits from 13% to 20%

School-wide Surveys: Pre (N=471) & Post (N=351)

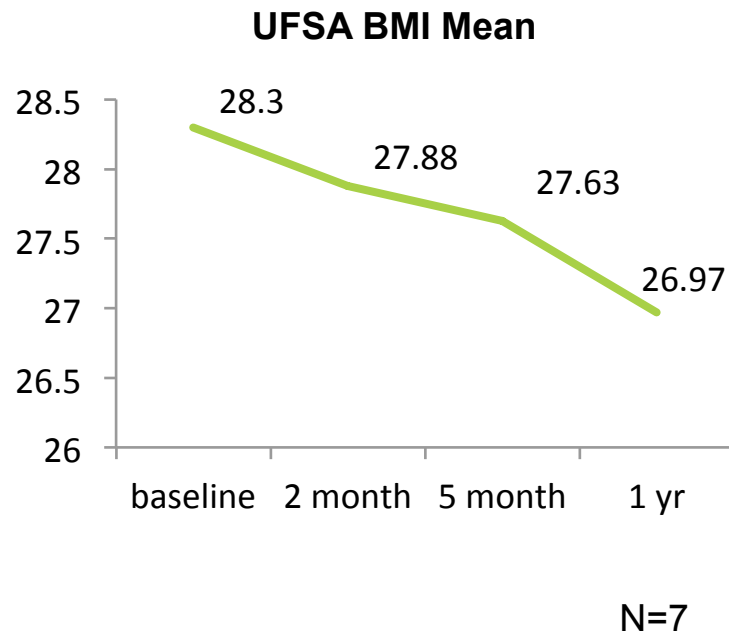


“Yesterday, how many times did you...Eat Fast Food -- Exercise outside of PE.”



Results

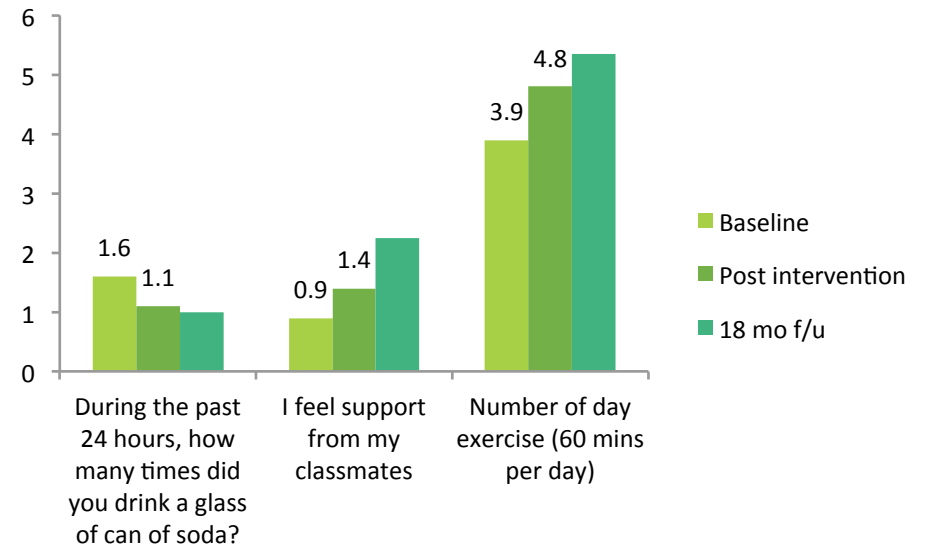
UFSA Data



In a small cohort with periodic follow-up, small decline in BMI. Larger cohort at Havenscourt did not show same decline

UFSA, Havenscourt & Roosevelt Data

Significant improvement of behaviors

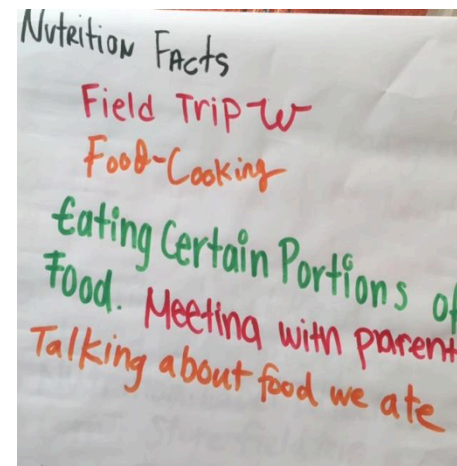


T1, T2 N=71, $p < 0.05$, T3 N= 10, trends

A closer look: 18 month Follow Up Focus Groups

Emerging themes from Havenscourt/UFSA:

- “Things you can experiment with” (interactive learning)
- “Calming stress down” (using distraction)
- “We don’t eat stuff we used to” (family involvement)
- Future: more support, group repetition



Curriculum Resources

- Exercise Your Options (Dairy Council)
- Nourish
- Jump Start Teen
- Food for the Sol
- Drexel lessons
- Purdue Extension lessons
- Health Snacking at the Corner Store
- Healthy Body Image for Middle School curriculum
- CATCH
- Nutrition to Grow On (CA Dept. Of Edu)
- Alameda County Nutrition Services
- The Bigger Picture



Major Lessons Learned

Bridging from the Individual to the Group

At the Patient Level

Youth learn specific skills in group visits and in parent-child events:

- Learning about foods & reading nutrition labels
- Tasting new foods
- Mindfulness/stress reduction
- More active participants than in single provider or HE interactions
- Remember and incorporate skills up to 18 months later

At the school-wide level

Potential for greater impact:

- Culture changes: seeds planted for shifts in behavior
- Changing teacher (role model) eating habits
- Bringing back the salad bar with broader student participation
- **Shift to pay for performance-how can we use partners & relationships to improve outcomes for an important & seemingly intractable public health issue**

Next Steps

- Revisiting our evaluations: More consistency in data collection vs. collective impact model?
 - What physical & indicators do we follow?
- Continuing chart review & analysis of youth who attended original groups – what kinds of follow-up lead to long-term changes/
- Replicating & evaluating schoolwide interventions



Impact of group visits: Youth Voices

“The thing was because every time when you’re stressed you feel like eating, and we’re like trying to calm down our stress so we don’t eat too much.”

“We used different foods that we never tasted that much and we made it into something that we liked.”

“I didn’t know how the food affected you so I would eat whatever what I wanted, and now I don’t. My mom helps me to eat more fruits and vegetables, and I’ll stick with them, you know, because I like them.”

“I didn’t know about reading the nutrition facts and my mom didn’t know about them. Now she checks everything, I mean everything, even the water. And she always gets the fresh fruits.”

Questions?

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