# California Health Improvement Project (CHIP) Bite To Balance: A Novel Intervention in Pediatric Obesity Care

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# Problem Statement and Underlying Causes

The traditional "one provider, one patient" model of care for pediatric obesity is ineffective. Epidemic rates of obesity, poor patient engagement, and the societal cost of downstream chronic medical conditions associated with pediatric obesity are imperatives for delivery system reform. In many urban settings, health care disparities in pediatric obesity rates are exacerbated by healthy food "deserts" where access to fresh fruits and vegetables is limited.

Current State:
Pediatric Obesity
Epidemic



Desired State:
Effective Engaging
Approach to Care

## Project Description

Bite To Balance is a novel six-month pediatric obesity program created at Highland Hospital which combines educational group visits and provision of fresh produce. Fresh fruits and vegetables via Community Sponsored Agriculture (CSA) are provided weekly in the medical home as a primary intervention and incentive for families struggling with pediatric obesity.

- Seven group-visit curriculum; language competence and cultural humility
- Cohorts of 5-15 families
- Group visits led by a nutritionist, pediatric provider, program coordinator, peer facilitator
- IRB-approved program with a goal to publish

## Goal and Objectives

Goal: To reduce pediatric obesity by creating an engaging group care model that is sustainable and outperforms national outcome measures in patient engagement and medical benefit.

Output-oriented Objective: 100 obese Highland Hospital pediatric patients will attend a minimum of 70% of *Bite To Balance* program visits by June of 2014. This will reflect high levels of patient engagement and family satisfaction, and outperform national benchmarks.

Outcome-oriented Objective: To maintain or improve body mass index (BMI) and serum obesity markers in 70% of 100 children enrolled in Bite To Balance group visits over six-month study program.

## Outputs & Outcomes

### Outputs Achieved:

- 1. 86 children and their families participated in the Bite To Balance program between April 2013 and June 2014.
- 2. 76.2% "show rates" have been attained. [Reported benchmarked average attendance is <50% in national data].

#### Outcomes Achieved:

- 1. BMI improved in 68% of program participants. (89% maintained or improved BMI% for age and sex).
- 2. Serum obesity markers: no statistically significant improvement (in available data) in HA1C, triglycerides and cholesterol in 6 month study period.

### Return on Investment per cohort:

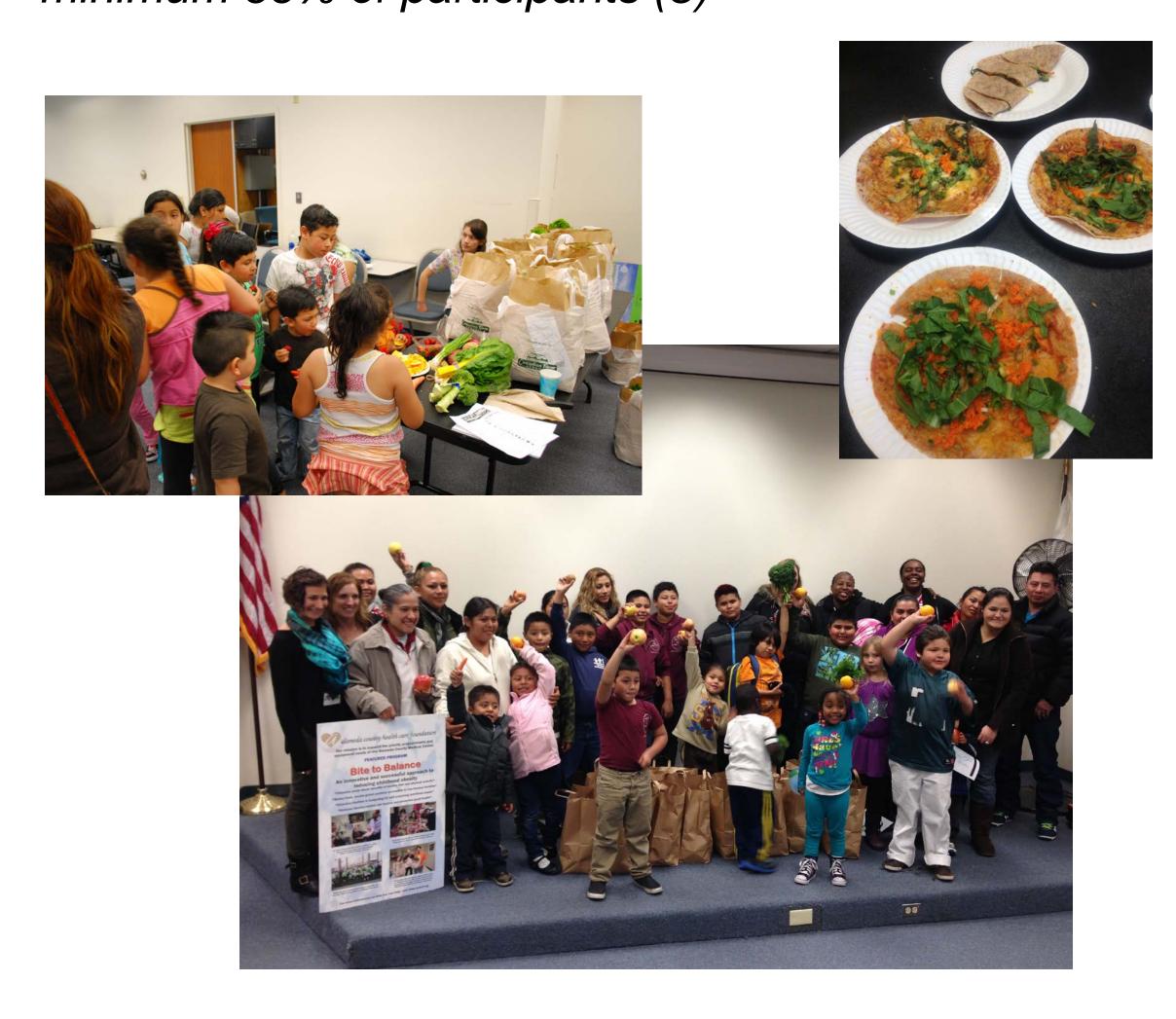
**PROFIT:** 8\* x \$234 x (7 visits) = \$13104

#### **EXPENSE:**

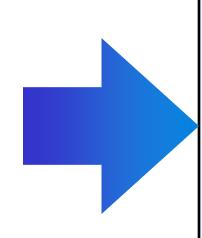
Human capitol =  $\$878.50 \times (7 \text{ visits}) = \$6149.50$ CSA bags =  $12^* \times 24 \text{ weeks } \times \$20/\text{bag} = \$5760$ Total expense = \$11909.50

#### \$1195 return per cohort (10% ROI)

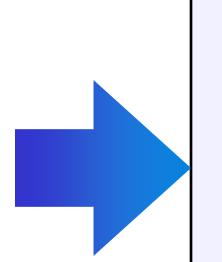
Assumptions: Cohorts of 12 enrolled, attended by minimum 66% of participants (8)



## Lessons Learned

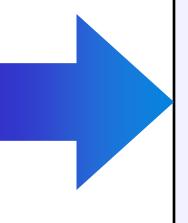


Incentives matter!
Aligned incentives [fresh
produce for obesity program
participants] can be critical to
success.



A positive ROI and good press can help attain institutional support for a project.





Regular communication with participating families via community building and social media (texting) increases engagement.



Longer term "downstream" clinical outcomes and health care savings are most intriguing.



## **About My Organization**

Alameda Health System (AHS) provides care to the residents of Alameda County at eight facilities in the Bay Area. Highland Hospital is the largest and busiest site in the system, serving the diverse urban population of Oakland, CA. The mission and vision of AHS include promoting wellness, eliminating health disparities, and optimizing the health of our community.

The demographics of our organization are reflected in those served by the Bite To Balance program: primarily low income, Spanish-speaking families facing disproportionately high rates of pediatric obesity.



## **Contact Me**

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To learn more about CHCF go to: http://futurehealth.ucsf.edu/