

Salud America!

Pilot Investigator
Project Results

*Healthy
Living Today!*

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Project Summary and Goal

- To assess whether addressing family lifestyles can improve childhood obesity
 - Interactive group classes for caregiver and child
 - Focusing on nutrition, exercise and stress management
 - Culturally sensitive family and individual coaching
 - Assisting to incorporate learned concepts into family and child lifestyles
 - Tailored to the family
 - Informed by community resources



Background

- Obesity ranks the most prevalent chronic conditions of children¹
- Massachusetts 2005²:
 - 13.6% of children were overweight in 2005
 - 29.9% of children living < FPL overweight
- Chelsea 2009³:
 - 75% of children are Latino
 - 47% 1st grade BMI > 85%: 30% BMI > 95%
 - 50% 4th grade BMI > 85%: 24% BMI > 95%
 - 56% 7th grade BMI > 85%: 31% BMI > 95%
 - 41% 10th grade BMI > 85%: 24% BMI > 95%
- Obesity has family-wide influences and effects

1. Perrin JM, et al . JAMA. 2007;297:2755-2759

2 U.S.DHHS [Http://www.cdc.gov/nccdphp/dnpa/](http://www.cdc.gov/nccdphp/dnpa/)

3. Chelsea School System Data

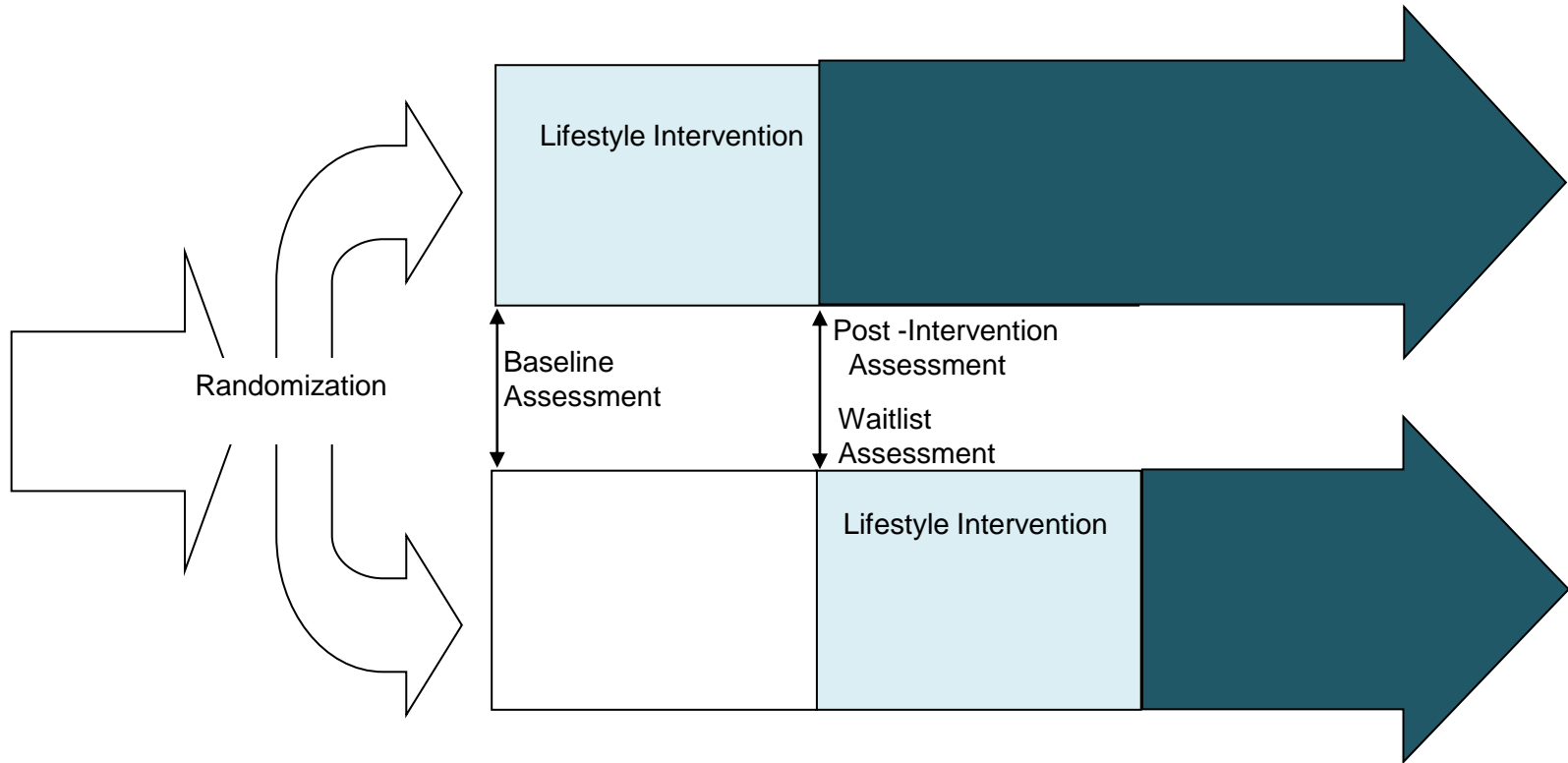


Chelsea, MA



Commonwealth of Massachusetts Department of Transportation

Study Design



Project Measures

Outcome	Measures
Daily physical activity	ActiGraph accelerometer
Food Intake	Dietary Questionnaire/Pilot Survey (adopted from SPAN survey)
Anthropometric measures	Z-BMI, <i>waist circumference, and skin fold</i>
Metabolic markers	Fasting lipids, HgA1C, <i>AST/ALT C-reactive protein, glucose, insulin, TNF alpha, and IL-6</i>
Quality of life score	PedsQL™ inventory



Power-Up



Project Accruals

	Intervention Subjects	Control Subjects
Recruited	23	18
Visit-1 Data Collection		
Accelerometer data	21	16
Anthropometric data	23	18
Biometric data	23	18
Quality of life data	23	18
Visi-2 Data Collection		
Accelerometer Data	12 (1 in progress)	2 (5 in progress)
Anthropometric data	20	6 (1 in progress)
Biometric data	14	7
Quality of life data	13 (1 in progress)	6 (1 in progress)
Loss to follow-up	9	4
To be collected in October	0	7



Participant Demographics

Baseline Characteristic	Intervention Subjects, n=23	Control Subjects, n=18
<i>Mean Age</i>	10.4	10.4
<i>% Female</i>	56.5%	55.6%
<i>% LEP</i>	69.6%	50.0%
<i>BMI</i>	28.2	30.2
<i>IBW %</i>	162.6	166.4



Accelerometer Data to Date

- 60 min/day of moderate to vigorous physical activity (MVPA)*
 - 42% - 90% of children ages 6-11
 - Girls cross MVPA at age 13.1
 - Boys cross MVPA at age 14.7
- At baseline, 20/37 participants (54%) of our participants had 60+ MVPA
- Post-intervention, 5/14 participants (36%) maintained 60 minute MVPA (includes 1 control)
 - May be due to changes in weather patterns at time of collection
 - 13 participants data to be analyzed

Pilot Data – Nutrition Survey

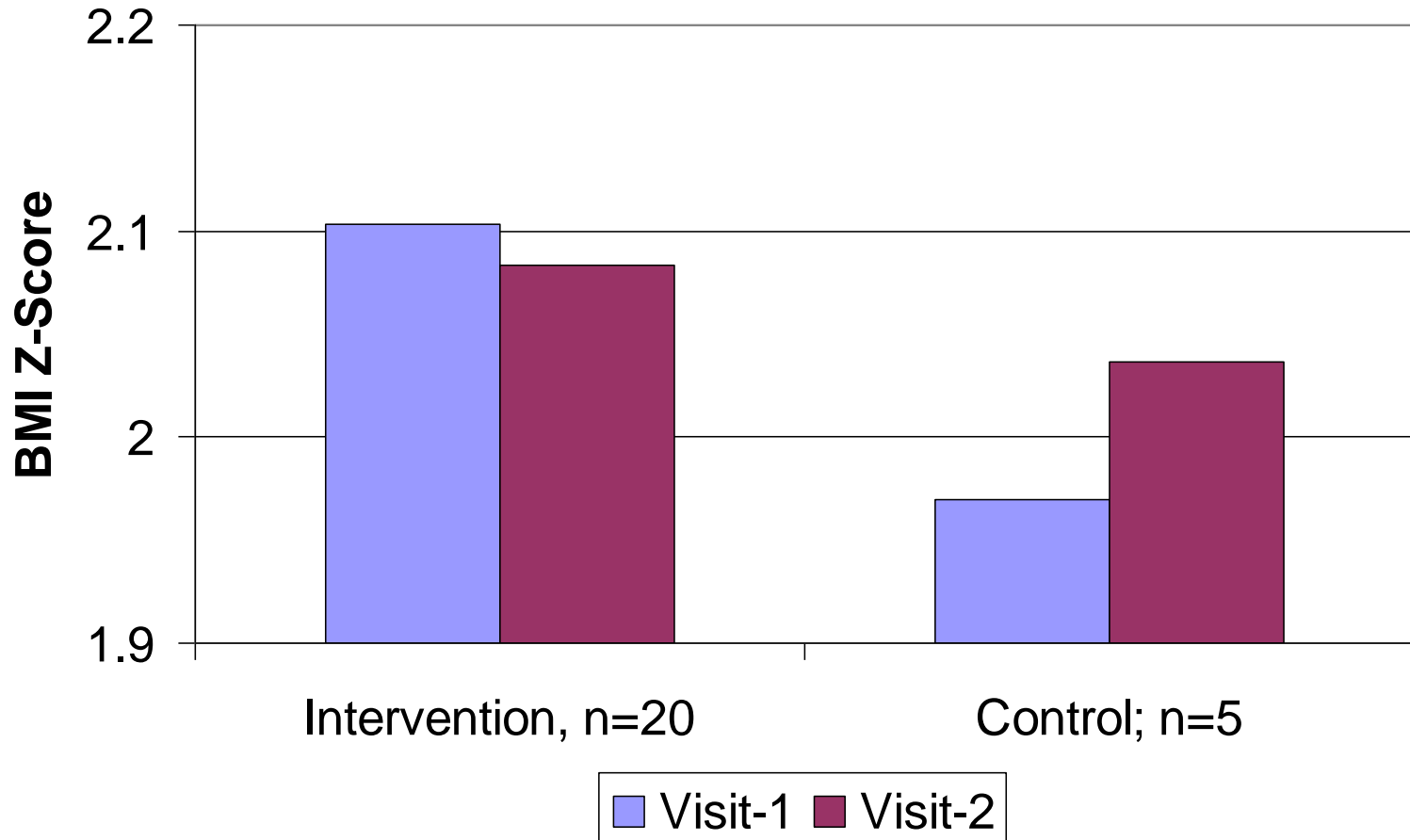
- Pilot data:
 - 19 participants
 - 8 post-intervention and 11 pre-intervention participants

- 90% usually/always eating school lunches
 - only 19% felt the school served healthy lunches

- 100% of survey takers reported they felt that they could make healthy food choices

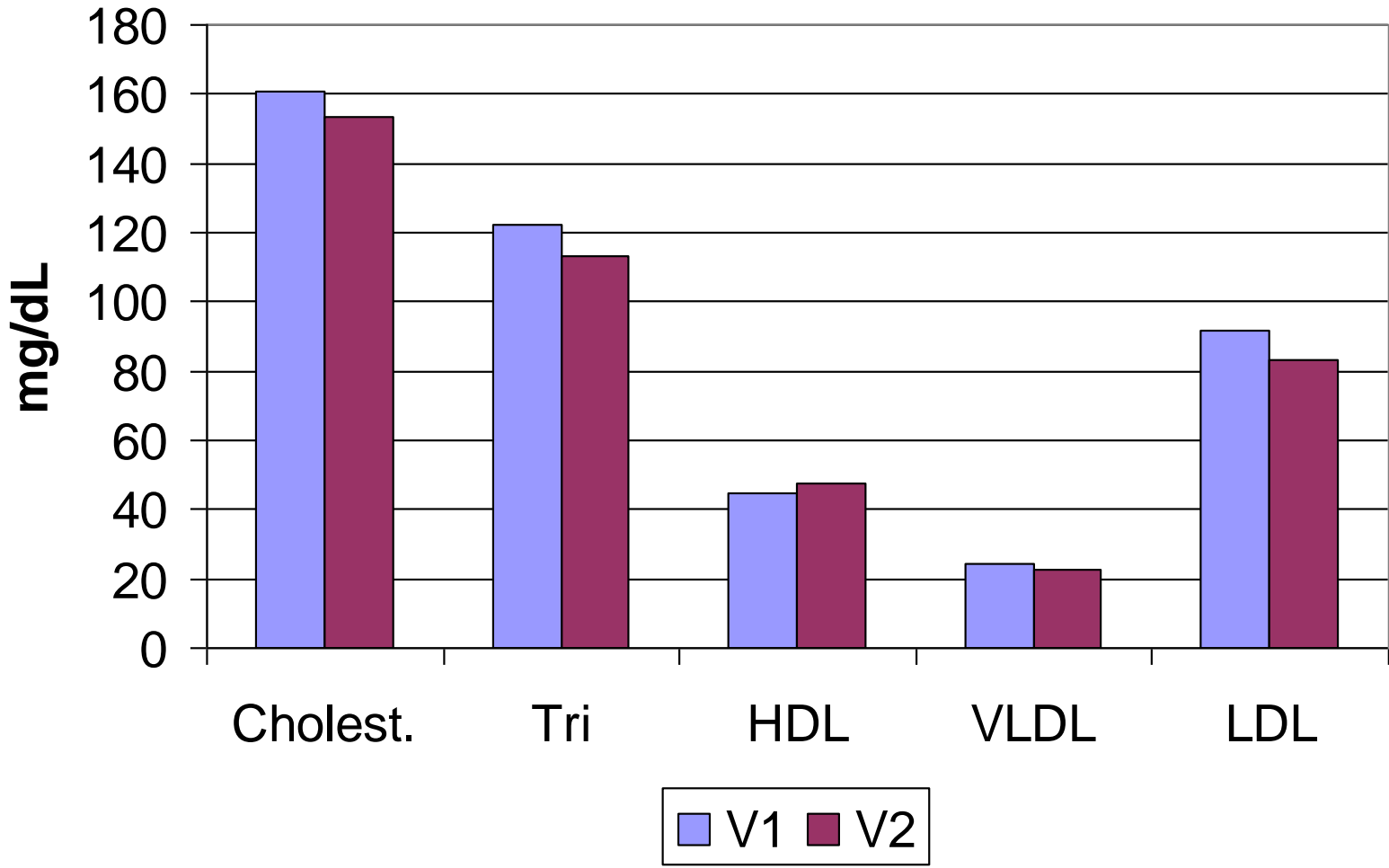


Changes in BMI-Z Scores



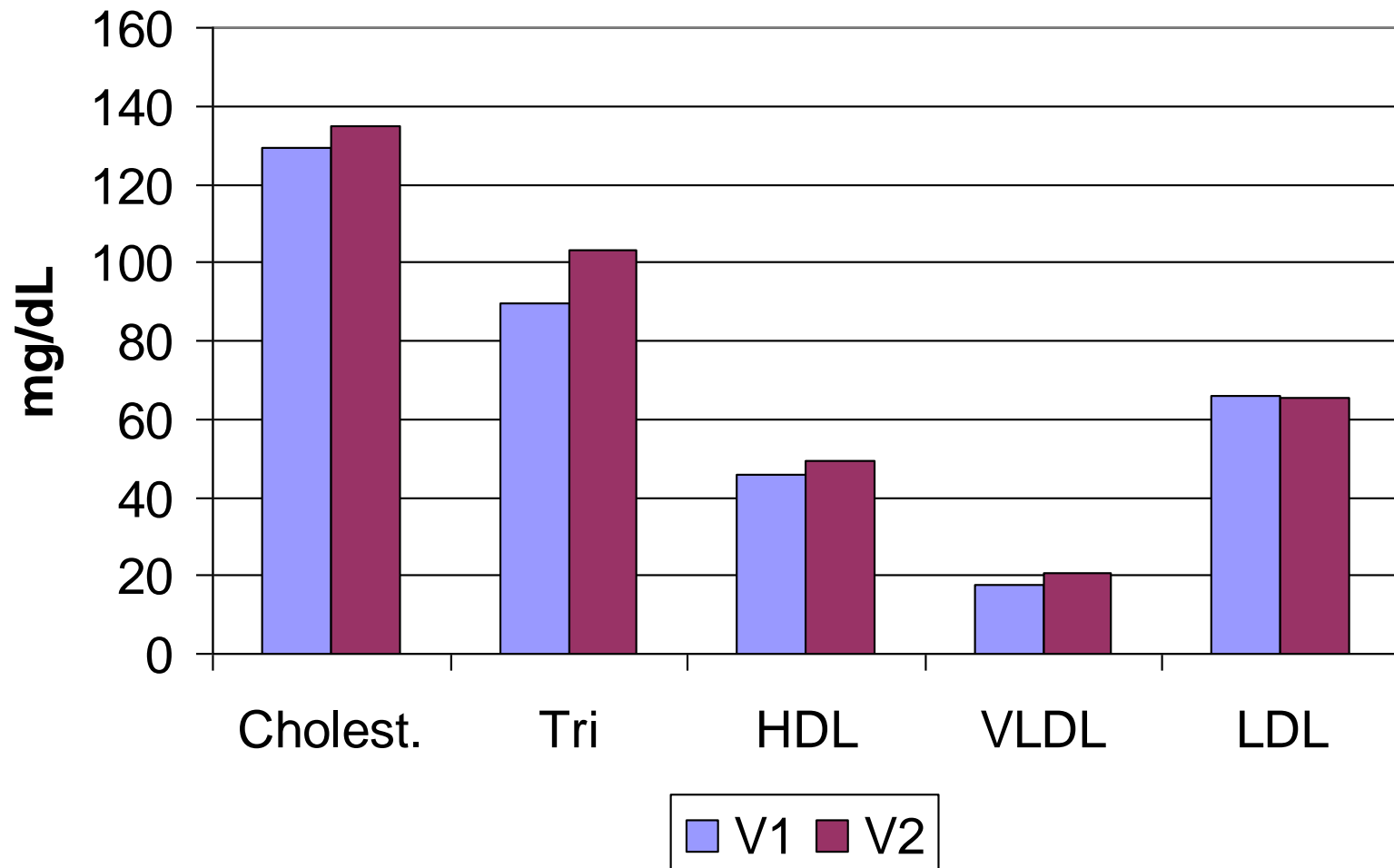
Lipid Panel – Intervention Participants

n=8



Lipid Panel – Control Participants

n=4



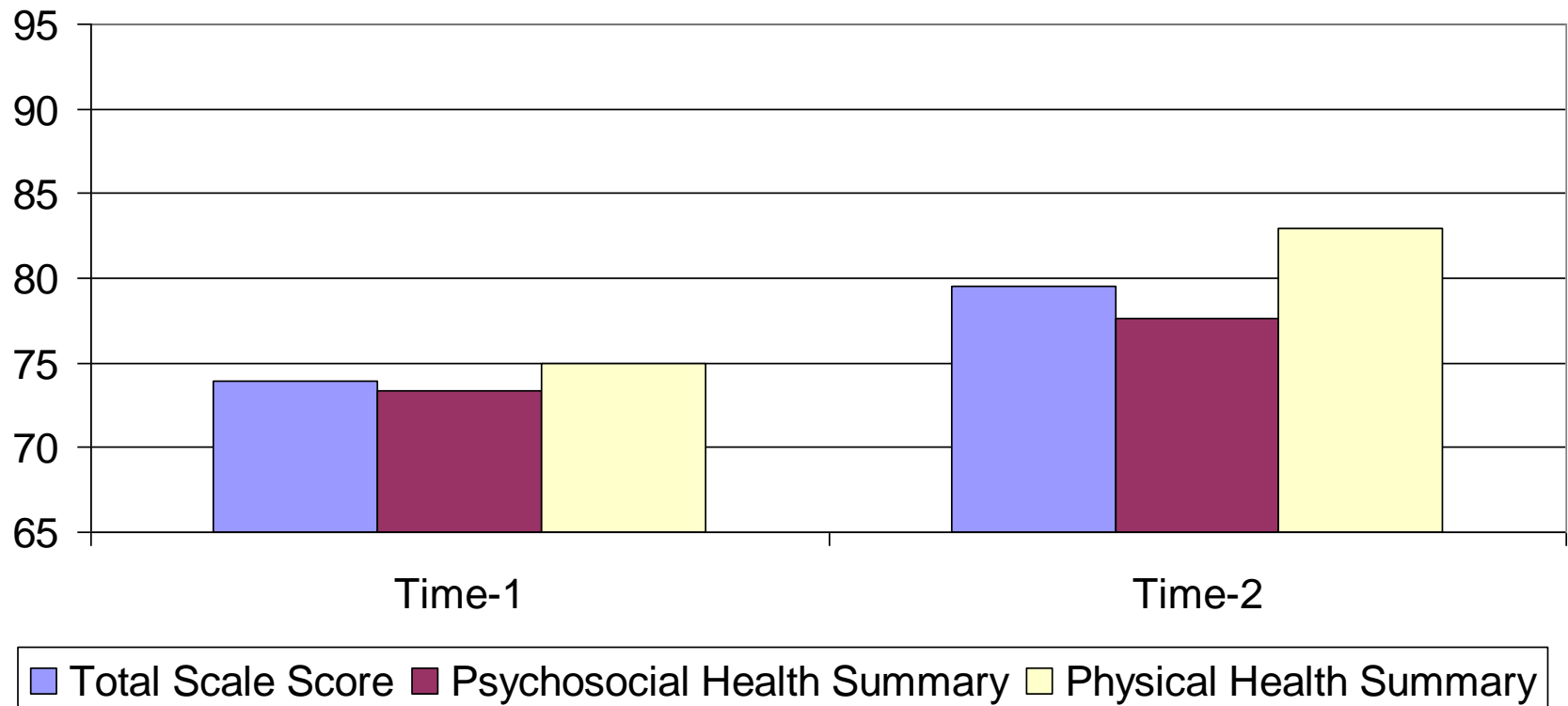
Hemoglobin A1C

Ha1C Results

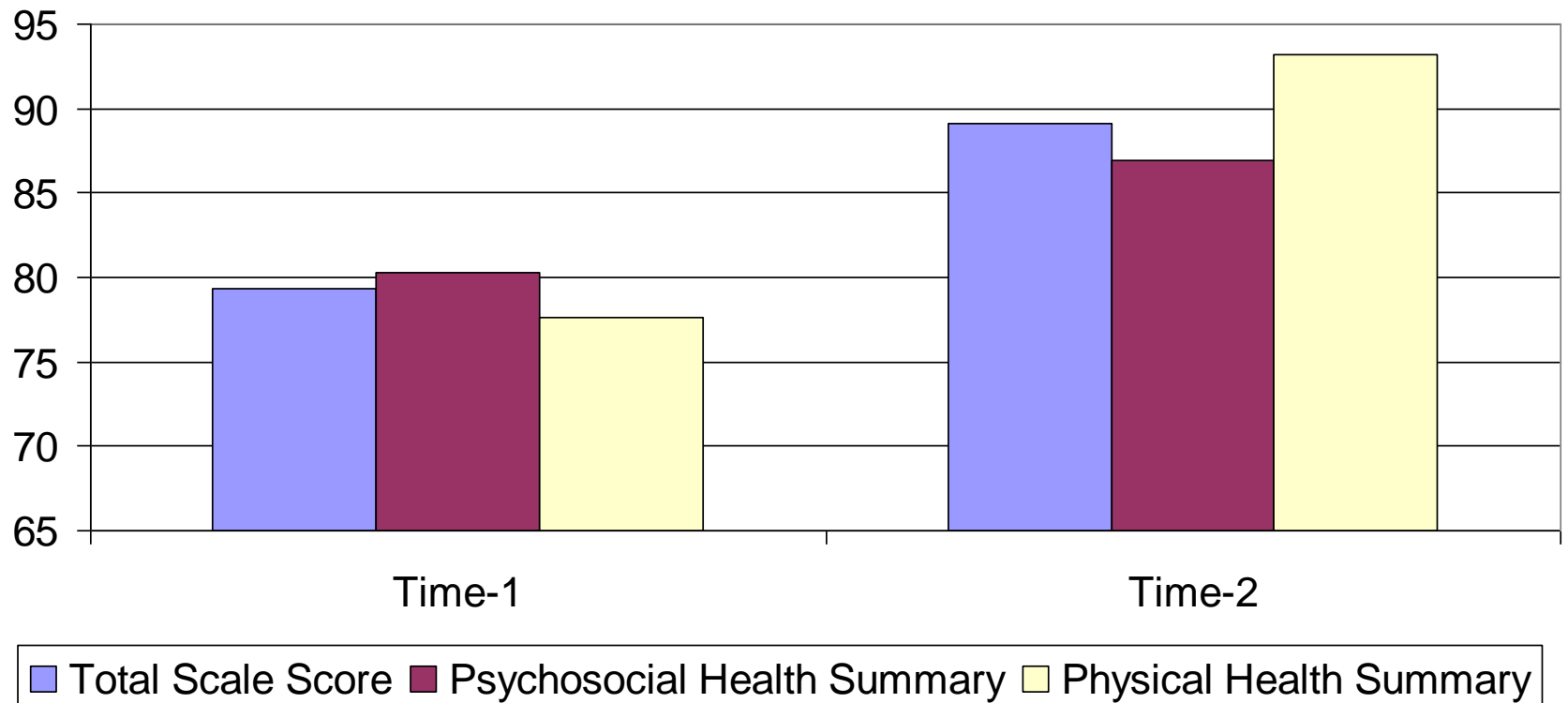
	Intervention n=14	Control n=7
Visit-1	5.66	5.43
Visit-2	5.68	5.52



PedsQL Child Self Scores – Intervention Subjects, n=13



PedsQL Child Self Scores – Control Subjects, n=6



Project Policy Implications to Date

- Community Engagement – Healthy Chelsea!
 - Inform round table of results and community assessment
 - Public Health Council, School Board, Health Center, Parents and Community Members
 - Engages health providers as part of multi-level solution
 - School action
 - “Take 10” started in middle school
 - School cafeteria menus
- Educational Group visit model incorporated in Health Center practice to address other health issues:
 - Asthma and child development



Project Activity Changes

- Partnering with established curriculum
 - Power-Up
 - Includes relaxation session
- Recruitment efforts
 - Pediatric providers vs. from diabetic clinic
- Change in measures
 - Dietary recall vs. grocery receipt glycemic index
- Time delay
 - IRB, Clinical Research Center, Staffing
- Group data vs. paired data analysis
 - Limited number of paired data



Project Presentations

- Arauz Boudreau AB, Oreskovich N, Gonzalez W. Healthy Living Today! Poster presentation at the Massachusetts General Hospital Center for Community Health Improvement Conference, Boston, MA. (June, 2011)
- Arauz Boudreau AB, Oreskovich N, Gonzalez W, Dimond M. Healthy Living Today! Poster presentation at the Massachusetts General Hospital Multicultural Affairs Career Development Meeting, Boston, MA. (October, 2010)



Grants Submitted/Awarded

□ Grants Awarded:

- “Healthy Living Today,” MGH Minority Affairs Career Development Award,

- project transfer requested July 2010; grant period 2010-2011, funds made available to help support this RWJF project.

□ Grants Submitted:

- “Health Living Today- Cooking Matters Extension”, General Mills Champions for Health,

- Submitted December 2010, \$10K

- “Healthy Living Today – Community Engagement,” AAP Implementation Catch Grant,

- Submitted February 2010, \$10K



Grants Submitted/Awarded

- Unrelated grants submitted:
 - “Medical Homes Transformation in Pediatric Primary Care; What Drives Change”
 - AHRQ R-18, Awarded, 7/1/2010-6/30/2012, \$135,406 subcontract
 - MGH Chelsea Adolescent and Pediatric Unit Medical Homes Transformation
 - Medical Homes CHIPRA MA Demonstration Project, UMASS/NCHQ, Awarded, 8/1/2011-2/28/2013, \$21,600



Career Development

- Awarded MGH Presidential discretionary funds to support PI research time
- PI and project focused as part of hospital fundraising
- Increased collaboration with the Office for Community Engagement
- PI heading Medical Home Initiative which will incorporate group visits as a model of care



Future Plans

- RWJ funded Healthy Living Today pilot:
 - One control groups in the field
 - Data analysis and manuscript preparation
 - Control for seasons, LEP and other family characteristics
 - Difference in difference analysis
 - Focus on outcomes and community participation

- Disparities Solution Center
 - Project to be focused as quality improvement strategy
 - Webinar series and leadership training series

- Clinical sustainability
 - Multi-disciplinary group visit billing



Future Plans

- Joint application for funding with the Office of Community Improvement for local project
 - Sustainability and expansion (cooking course series)
 - Community engagement
 - Evaluation of “Take 10” school project

- Collaboration with Pulmonary Clinic
 - Environmental-Clinical approach to addressing asthma and obesity as co-morbidities



Thank You

- Wanda I. Gonzalez, Co-Investigator
- Nicolas M. Oreskovic, Co-Investigator
- Daniel Kurowski, Research Assistant
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- Power-up Team
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 - Sofia Divine
 - Ming Sun

