

# Randomized Controlled Trial of a Primary Care-Based Child Obesity Prevention Intervention: Impacts from 6 months through 3 years

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## Background

- Prenatal and pediatric primary care visits represent a unique opportunity to reach high-risk families for child obesity prevention
- Obesity-promoting diet/activity practices begin during pregnancy
- The "Starting Early Program" is one of the first comprehensive early child obesity prevention programs to target low-income, Hispanic families during both prenatal and pediatric primary care
- Designed for families with children at highest risk of early obesity

## Objective

- To determine Starting Early impacts on feeding and activity practices and weight and risk of overweight from birth to 3 years in low-income Hispanic families

## Methods

### DESIGN/SUBJECTS

- **Randomized Controlled Trial** which enrolled Hispanic pregnant women at a 3rd trimester prenatal visit
- Usual care control group vs. an intervention group participating in prenatal counseling, postpartum lactation support and nutrition and parenting support groups coordinated with well-child visits
- **Inclusion criteria:** Hispanic/Latina women, English or Spanish Speaking, at least 18 years old, uncomplicated singleton pregnancy
- **Exclusion criteria:** Severe medical or mental illness, homelessness, substance abuse, severe complications with pregnancy or fetus

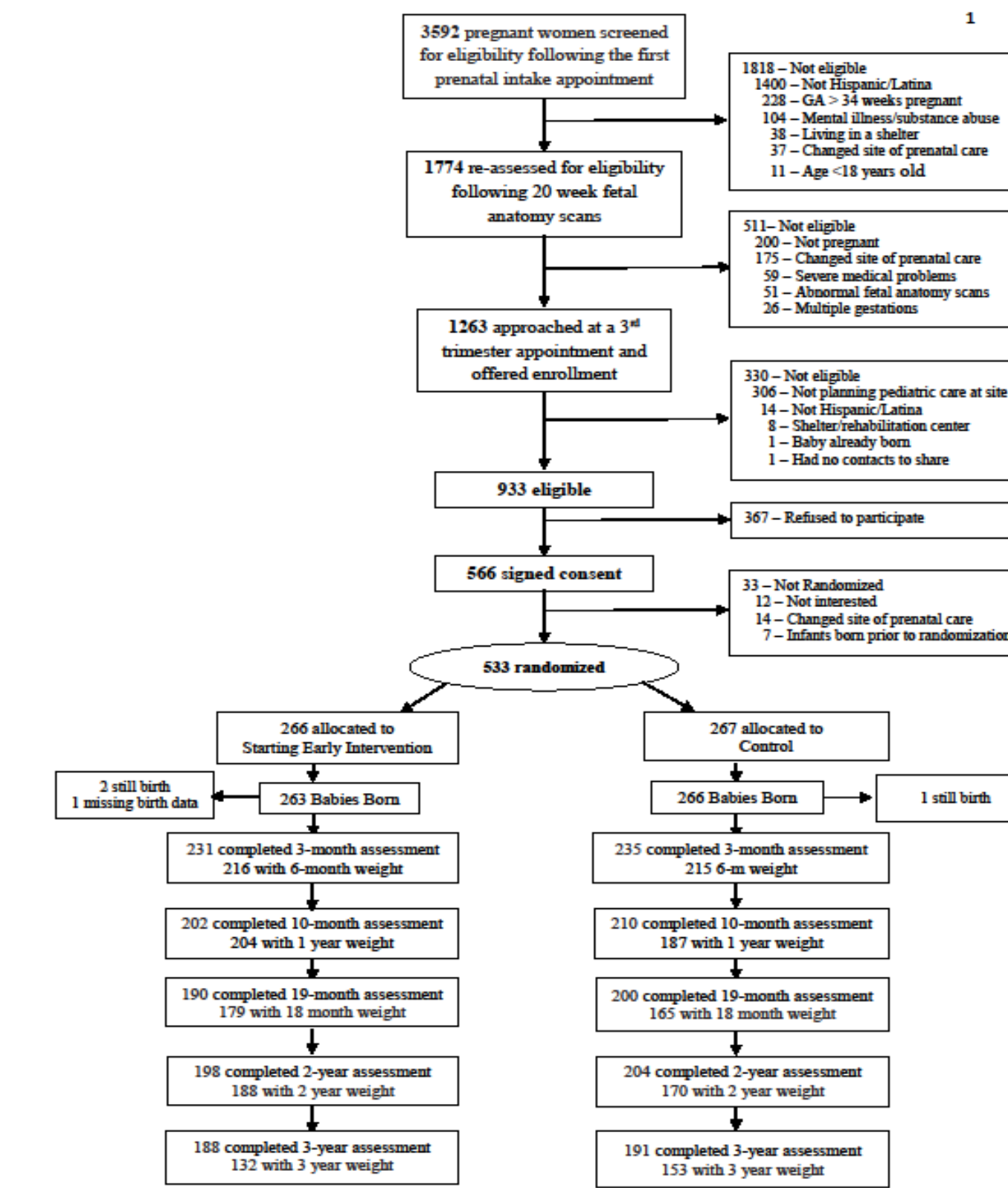
### OUTCOME

- Weight for age z-scores (WFAz) based on WHO growth charts
- Growth parameters obtained from medical records
- WFAz  $\geq 95^{\text{th}}$  defined as overweight
- Feeding practices and styles, and activity practices assessed by 24-hour recalls and validated survey measures

### STATISTICAL ANALYSIS

- **Independent sample t-tests and chi square** to assess intervention impact on feeding and activity at 3, 10 and 19 months and WFAz at 6, 12, 18, 24 and 36 months old
- Using **within-intervention group analyses**, we explored the impact of number of sessions attended on mean WFAz and % overweight

## Results



## Study Sample (n=533)

Maternal Characteristics	Control	Intervention	p-value
Age (mean (SD))	27.9 (5.8)	28.5 (6.0)	.20
US born	19%	21%	.56
Education (less than HS)	29%	38%	.03
WIC participant	85%	89%	.20
Prenatal depressive sx	34%	34%	.88
Pre-pregnancy obese	31%	30%	.80
Gestational weight gain (kg)	10 (5.4)	9.7 (5.4)	.50
Infant Characteristics			
Female sex	49%	51%	.60
C-section	24%	24%	1.00
Birth weight z-score	.02 (1)	-.05 (.2)	.30

## Program Impacts on Feeding and Activity

### At infant age 3 months:

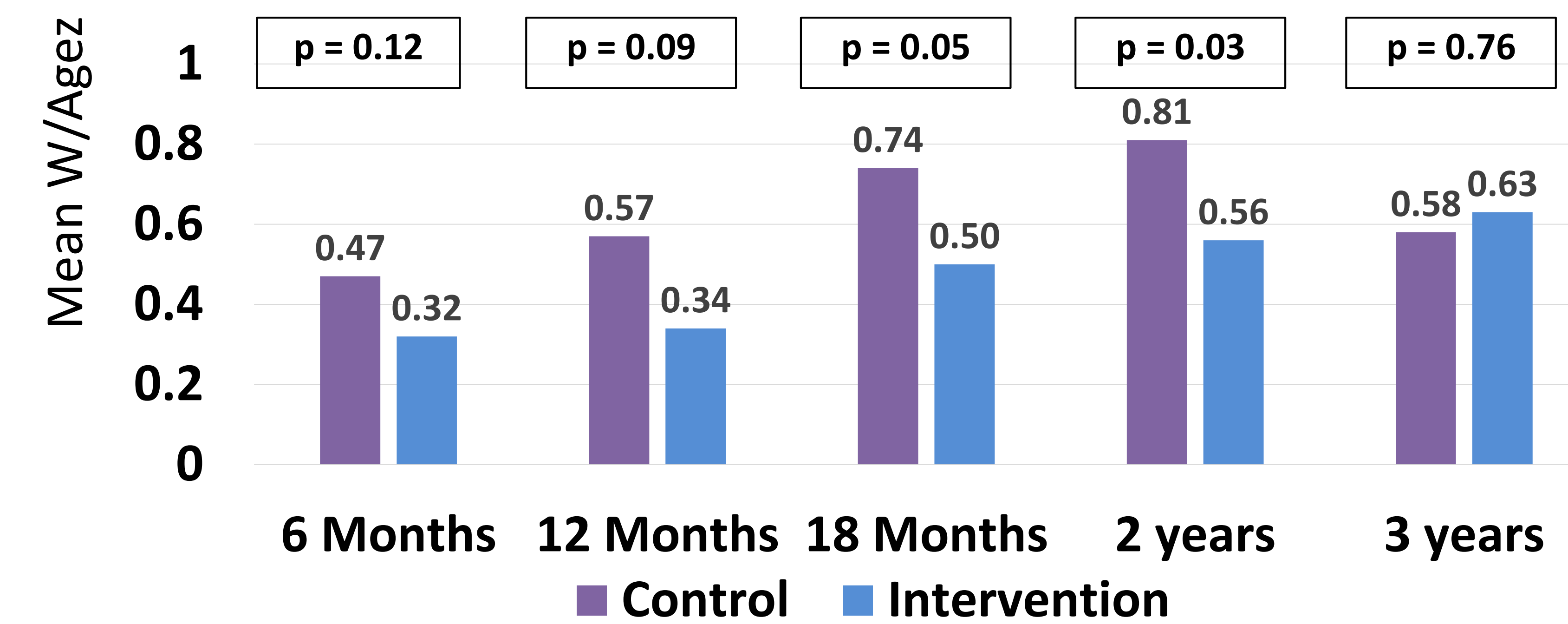
- Increased exclusive breastfeeding and intensity
- Reduced early introduction to complementary foods/liquids
- Increased infant tummy time and increased unrestrained floor time
- Increase in breastfeeding mediated by increased maternal knowledge
- Increased infant tummy time and increased unrestrained floor time
- Greater exposure to the intervention led to increased impacts

### At infant age 10 and 19 months:

- Increased breastfeeding and daily family meals
- Reduced juice consumption and cereal in the bottle
- Decreased non-responsive maternal infant feeding styles
- Decreased excess milk consumption

## Weight and Dose Results

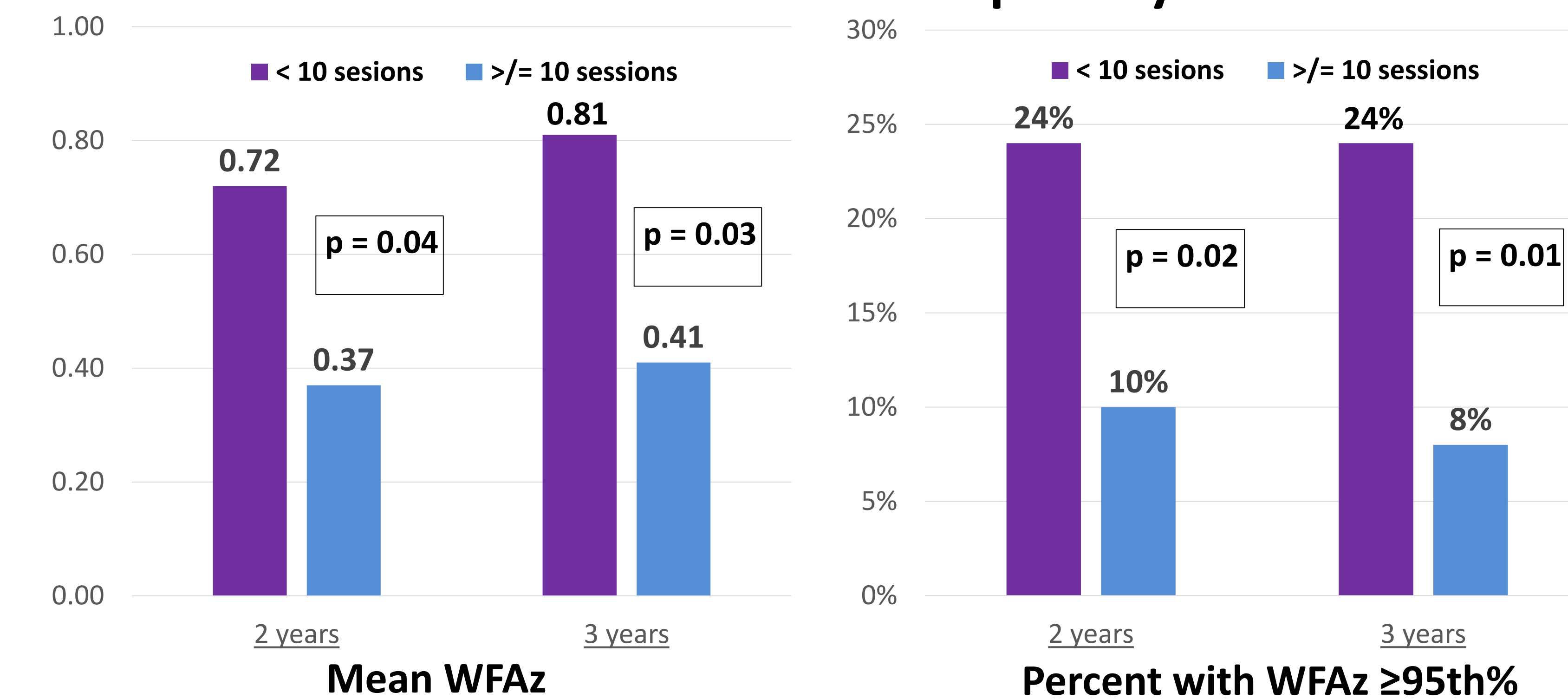
### Intention to Treat Analysis



## Dose Effect

- Mean 7.8 (range 1-15) out of 15 possible sessions attended
- Top tertile attended  $\geq 10$  sessions by age 3 years
- Within the intervention group, those attending  $\geq 10$  sessions at age 2 and 3 years had:
  - Lower mean WFAz
  - Reduced risk of overweight

## Within Intervention Group Analysis



## Conclusions and Implications

- Starting Early intervention infants had healthier feeding and activity practices
- Intervention infants had lower mean weight for age z-scores, with a dose dependent reduction in overweight risk
- Findings demonstrate a scalable system with the potential to augment obesity prevention in primary care for at-risk families

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