

Promising approaches for delivering and scaling-up Diabetes Prevention Program - translation in underserved communities nationwide

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Presenter Disclosure

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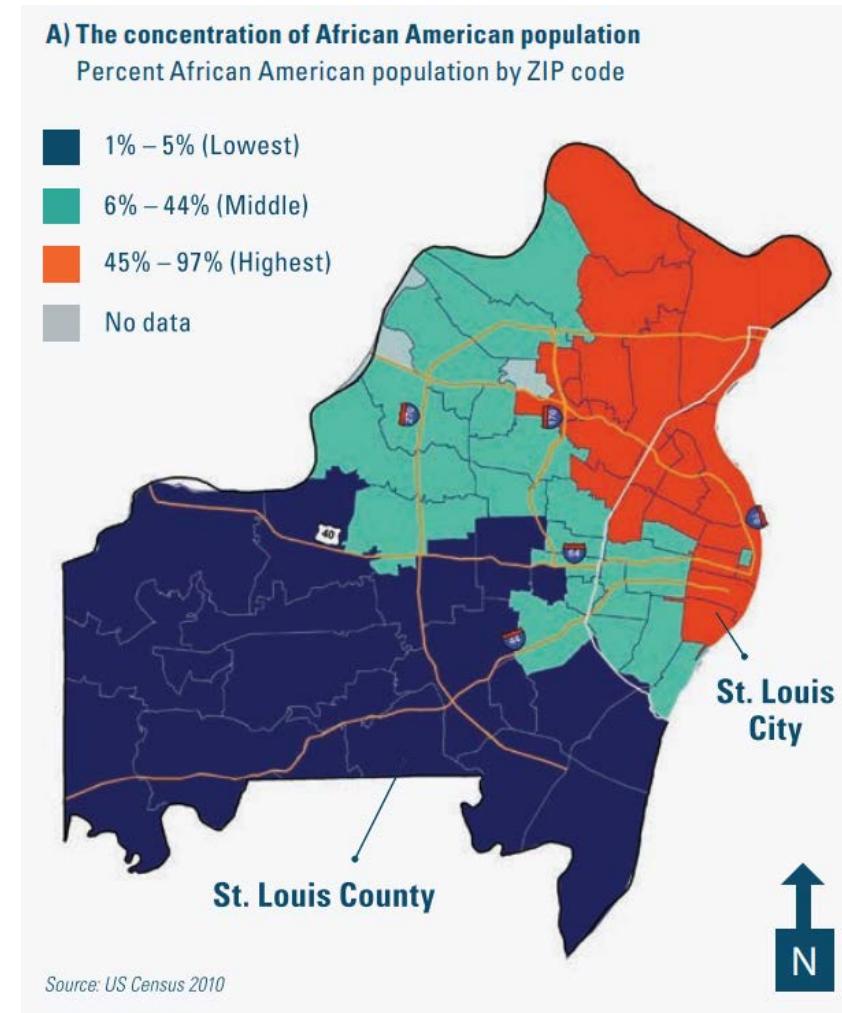
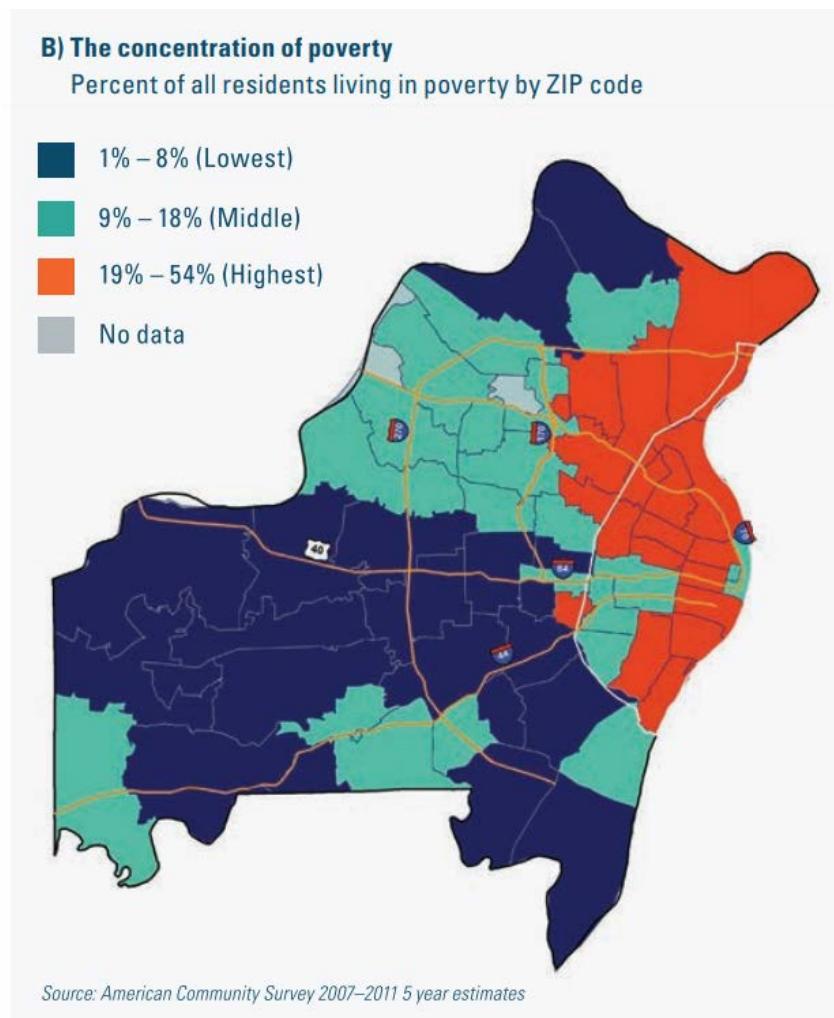
Reversing the obesity epidemic

Women (18-39 yrs)

- Average annual weight gain (0.5-1 kg per year)
- Vulnerable to weight gain vs. other life periods
- Limited reach of efficacious interventions
- Diabetes Prevention Program-58% delay diabetes incidence
- Women half as likely to enroll-less likely attend ≥ 1 session

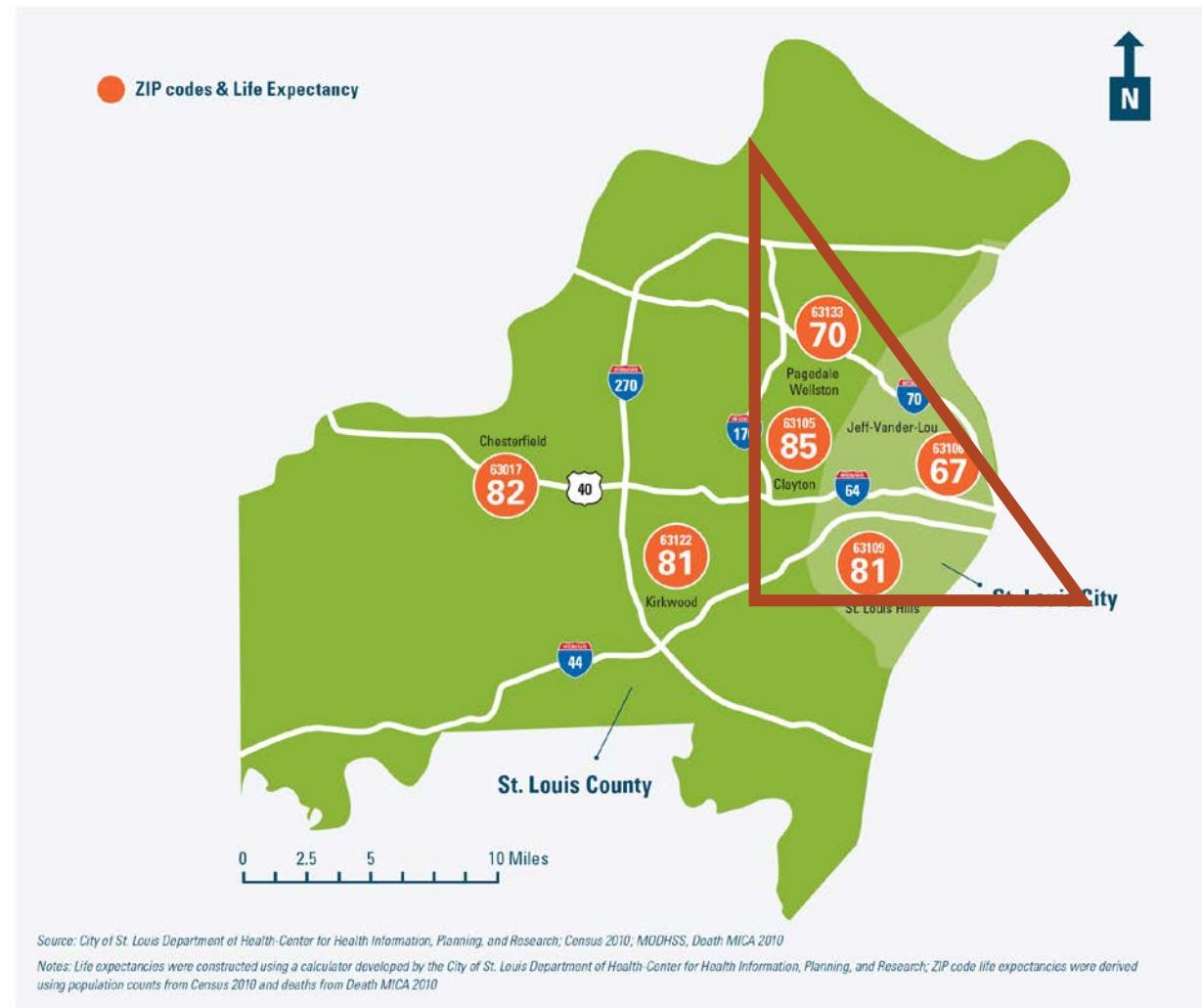


St. Louis context



Mortality rates by race and zip code

Figure 17. Life expectancy at birth by ZIP code



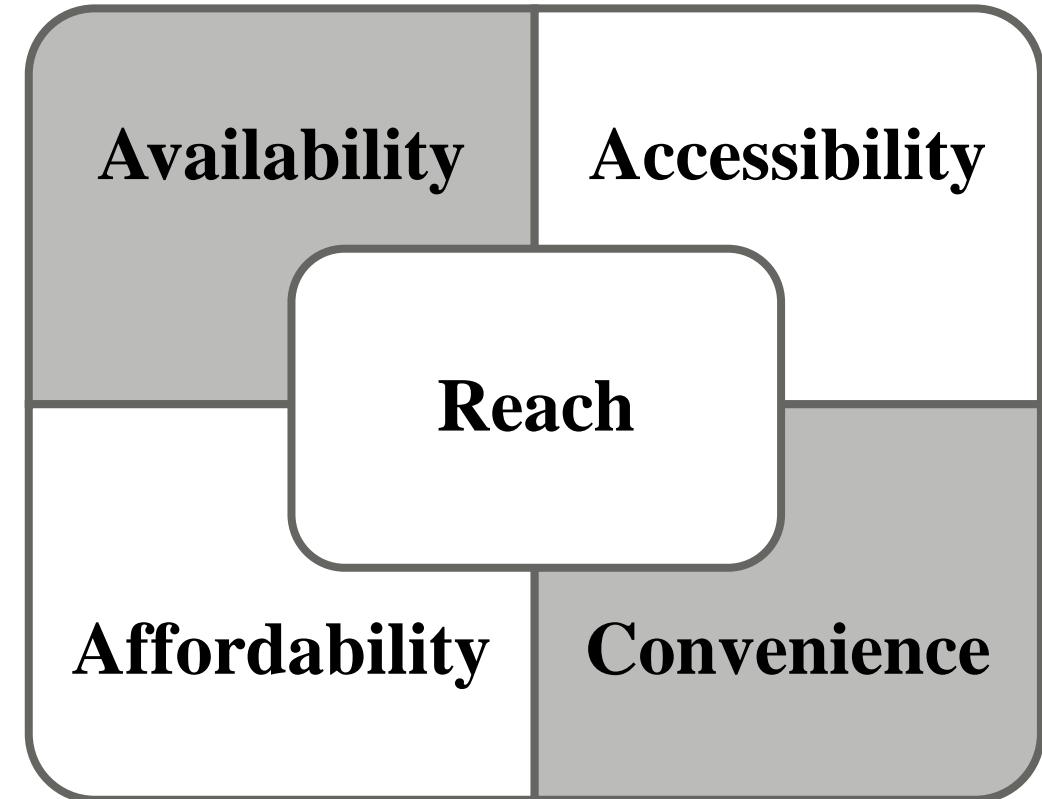
Partnerships with home visiting organizations

Strengths

- Meet family priorities
- Address essential conditions, needs
- Reinforce ongoing support, change

Challenges

- Non health care focused
- Criteria for reimbursement
- What and how to include content



Parents As Teachers: national home visiting program

Mission: To promote optimal early child development by supporting and engaging parents through home visitation

Standard curricula and trainings for parent educators
N=4849

Prenatal until child enters to school

Up to 25 home visits per year

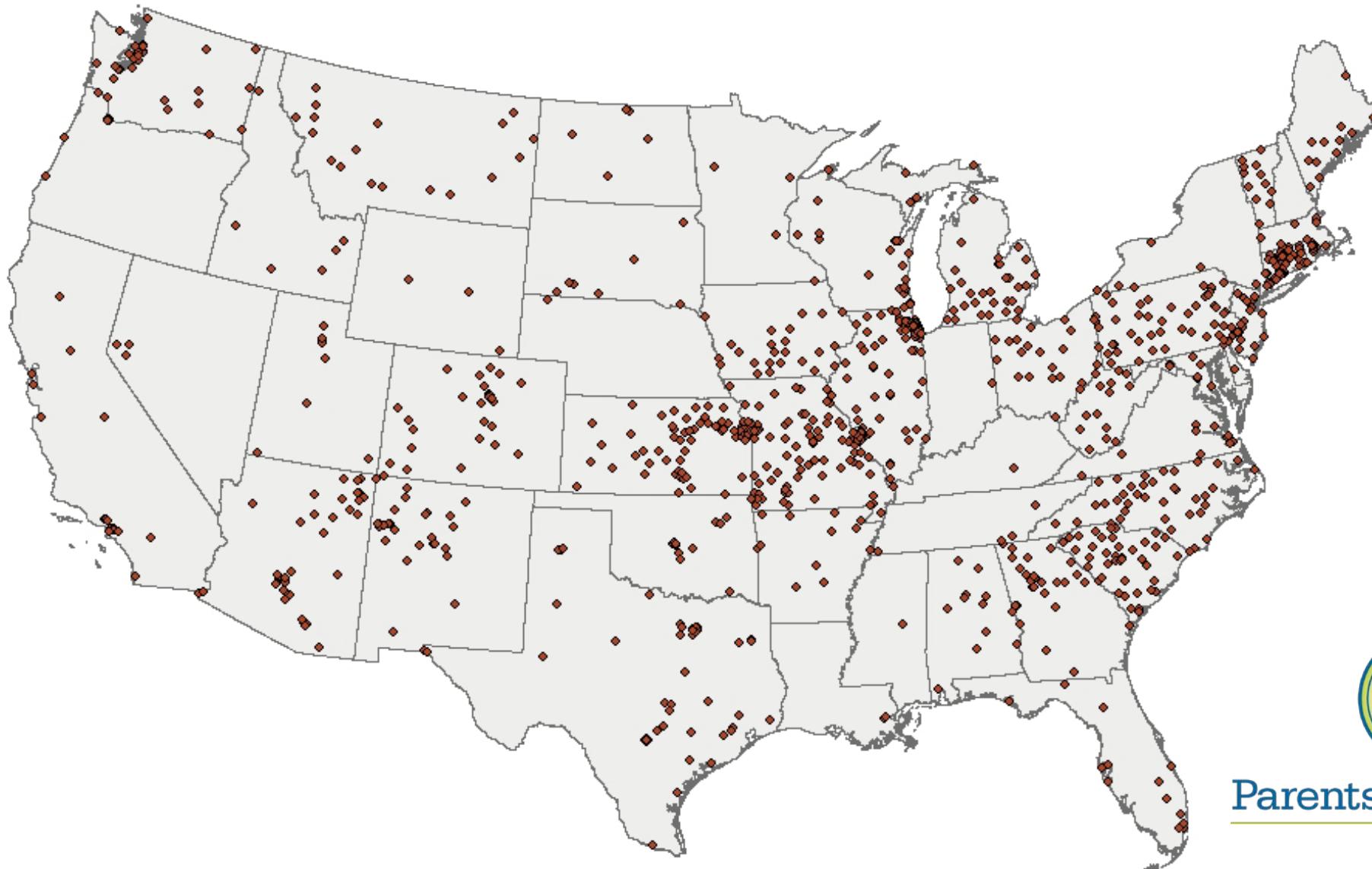
4727 sites across 50 states

Free to parents, through state & federal \$\$

188,253 parents
226,904 children

American Indian 5%
Black 20%
Hispanic 22%
White 59%

Network of sites: local focus-national reach



Parents as Teachers®

Parents as Teachers Program locator (March 2019)

Healthy Eating & Active Living Taught at Home (HEALTH)

Diabetes Prevention Program (DPP)

Mos 1-6: 1 session/wk
Coaches, contact, supervised
Mos 7-12: 1 session/mo
Group support

Translate DPP to PAT

- Mothers with preschooler who have obesity or overweight
- When compared to PAT, PAT+HEALTH women will achieve 5% wt. loss/24 mos

Embed DPP within PAT home visits: guiding principles

The what

- DPP ‘key ingredients’
- Specific behaviors (e.g. SSB, portions, walking)
- Adapt content--parent modeling, child development



The how

- Assure relevance to family needs first
- Family strength—solution focused interaction
- Flexible delivery

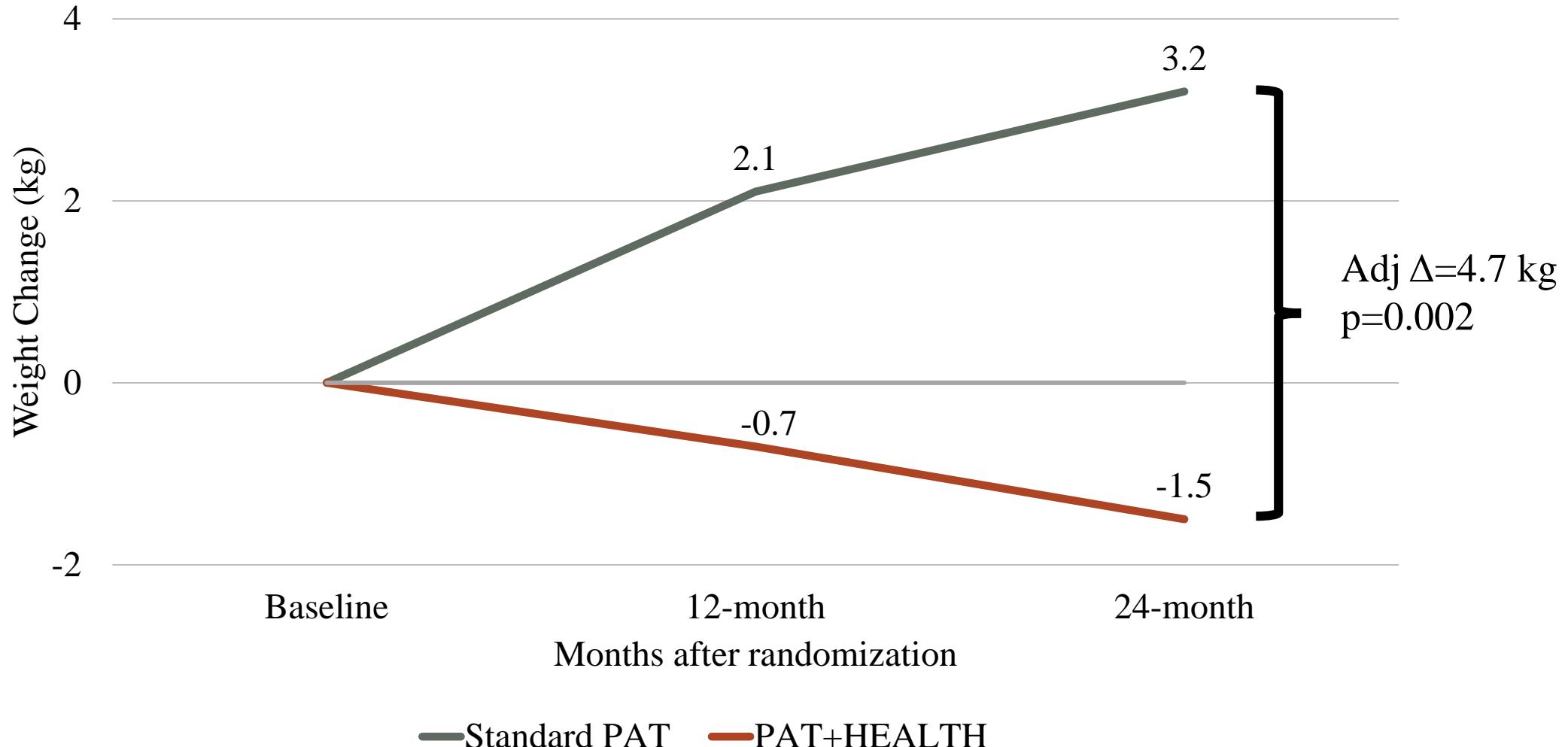
Baseline characteristics: PAT vs. PAT+HEALTH (N=179)

| | Standard PAT (N=97) | PAT+ HEALTH (N=82) | P value |
|---|------------------------------------|-----------------------------------|----------------|
| Maternal age (yrs) mean (SD) | 33 (5) | 32 (6) | 0.91 |
| BMI (kg/m ²) mean (SD) | 34.5 (5.2) | 34.4 (5.3) | 0.91 |
| Race: non-white (%) | 39 | 44 | n/a |
| WIC (%) | 46 | 58 | 0.14 |
| Annual household income < \$30,000 (%) | 38 | 40 | 0.65 |

Results: behavior and % weight outcomes baseline-24 months

| | Standard PAT | PAT+ HEALTH | P value BL-24 mos |
|------------------------------|---------------------|------------------------|------------------------------|
| Added sugars from food (tsp) | 15.3 to 13.0 | 14.9 to 10.8 | 0.01 |
| Added sugars from SSB (tsp) | 8.5 to 6.6 | 8.1 to 5.1 | 0.01 |
| Physical activity-vigorous | 28% to 20% | 10% to 30% | 0.004 |
| <hr/> | | | |
| 5% weight loss at 24 mth. | 11% | 26% | 0.01 |
| Waist circumference (cm) | 111.1 to 115.3 | 110.5 to 108.5 | 0.04 |

Maternal Weight Change over 24 Months in HEALTH Effectiveness Trial by Randomization Assignment



Scale-up and sustainability



HEALTH
Healthy Eating, Active Living
Taught at Home

- HEALTH D&I-National trial in partnership with PAT
- Pragmatic group randomized trial
- 28 sites across multiple states
- Data from 3 levels: mother, sites, parent educators
 - Weight
 - Acceptable, Appropriate, Adapt
 - Context
- Translation of HEALTH to national practice

Weight management with pregnant and underserved African American women with obesity

- Multisite national trial
- Different weight management interventions during and post pregnancy
- Washington University site: Randomized control trial
- Standard PAT vrs. LifeMoms PAT+ on GWG & 12 mo. postpartum weight



- Pregnant African American Women with overweight-obesity (N=276)
- 54% single
- 92% poverty
- 51% moved once, 12% twice while pregnant
- Crime 111% > natl avg

Pregnant Women

Prenatal Clinic Care

- OB visit
- 2nd monthly
- 3rd bimonthly, wkly

- PAT standard prenatal-postpartum curriculum
- PAT+ embed lifestyle
- 10 prenatal; 12 postpartum visits

Parents As Teachers
Home Visiting

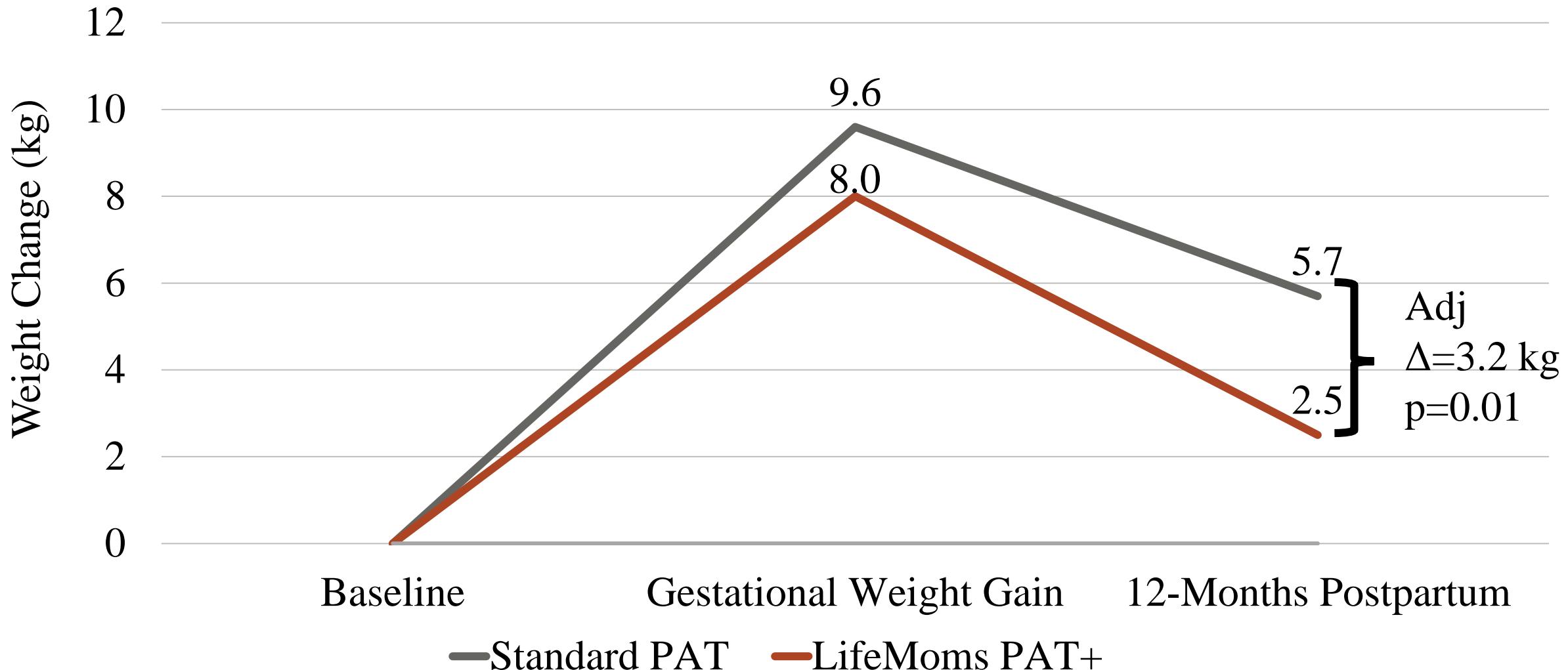
Baseline characteristics: PAT vs. LifeMoms PAT+

| | PAT (N=134) Mean \pm SD | LifeMoms PAT+ (N=133) Mean \pm SD | P value |
|--------------------------|---|---|----------------|
| Maternal age (yrs) | 26.0 ± 4.9 | 24.7 ± 4.9 | 0.04 |
| BMI (kg/m ²) | 31.9 ± 4.9 | 32.8 ± 5.1 | 0.16 |
| Body weight (kg) | 86.1 ± 15.2 | 87.3 ± 16.1 | 0.52 |
| Overweight (n, %) | 52 (38.8) | 42 (31.6) | 0.22 |
| Obesity (n, %) | 82 (61.2) | 90 (67.7) | 0.27 |
| Medicaid (n, %) | 119 (92.2) | 119 (90.8) | 0.42 |

Results: prenatal and postpartum weight outcomes

| | PAT vs. LifeMoms PAT+ | P value |
|-----------------------------------|-----------------------|---------|
| Prenatal (N=267) | | |
| Total GWG (kg) | 9.64 vs. 8.05 | 0.02 |
| Weight gain per week (kg) | 0.48 vs. 0.40 | 0.04 |
| Weekly GWG > than guidelines | 77.4% vs. 62.4% | 0.01 |
| Change in body fat (kg) | 2.18 vs. 0.25 | 0.01 |
| Postpartum (N=209) | | |
| Return to baseline or less weight | 21.5% vs. 38% | 0.01 |

Maternal gestational and postpartum weight change over 24 months by randomization assignment



Conclusions and next steps

1. ‘Non-health care’ organizations addressing essential conditions may be a roadmap to promote health equity
2. Long-term follow-up is needed to capture full impact of interventions that prioritize ‘real life needs’
3. Bringing effective lifestyle interventions to scale should be priority