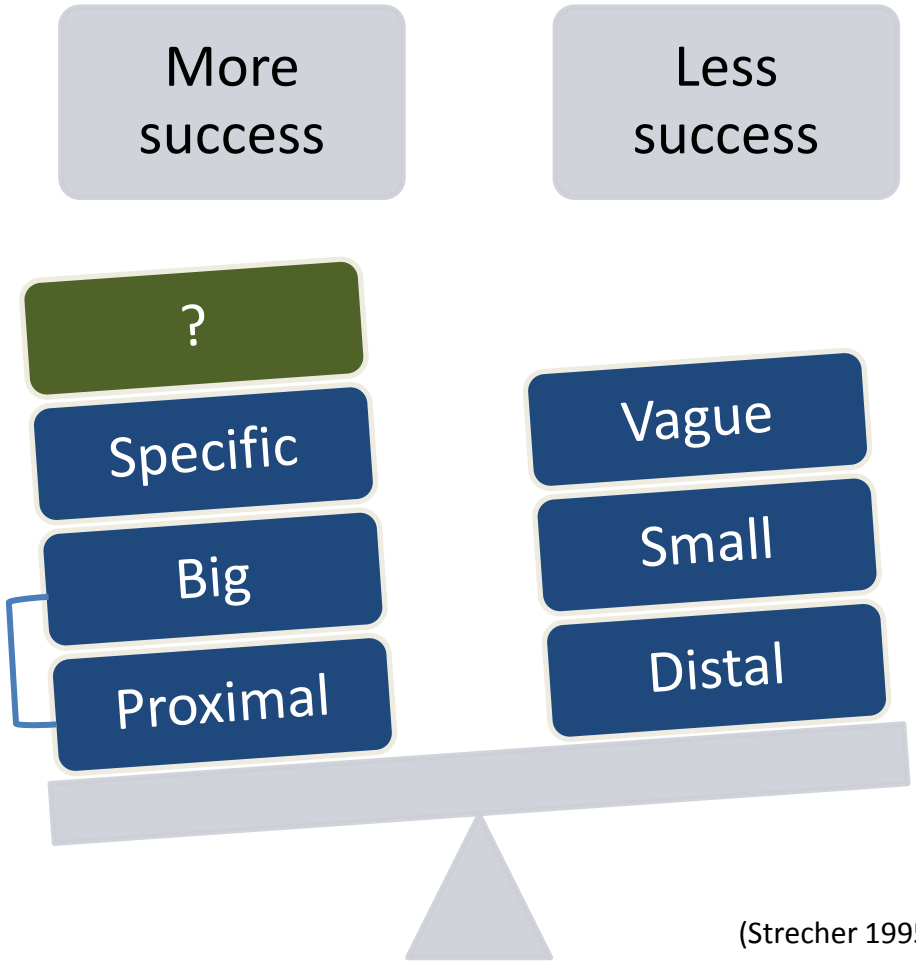
Who Decides? Self-selected versus Assigned Goals for Weight Loss in a Veteran Population

Mona AuYoung, PhD, MS, MPH
Ann Arbor VA Center for Clinical Management Research
Society of Behavioral Medicine Annual Meeting
March 31, 2016

Goal Setting and Weight Loss



(Strecher 1995, Durant et al., 2013; Pearson 2011)

Patient Choice and Veterans

- **Diet**
  - No weight loss difference by diet choice (Yancy WS et al, 2015)
  - No weight loss difference by diary preference, but association with adherence (Shay LE et al, 2009)

- **Physical activity**
  - Physical activity counseling enhances self-selected activity goals among Veterans (Hall et al, 2010)

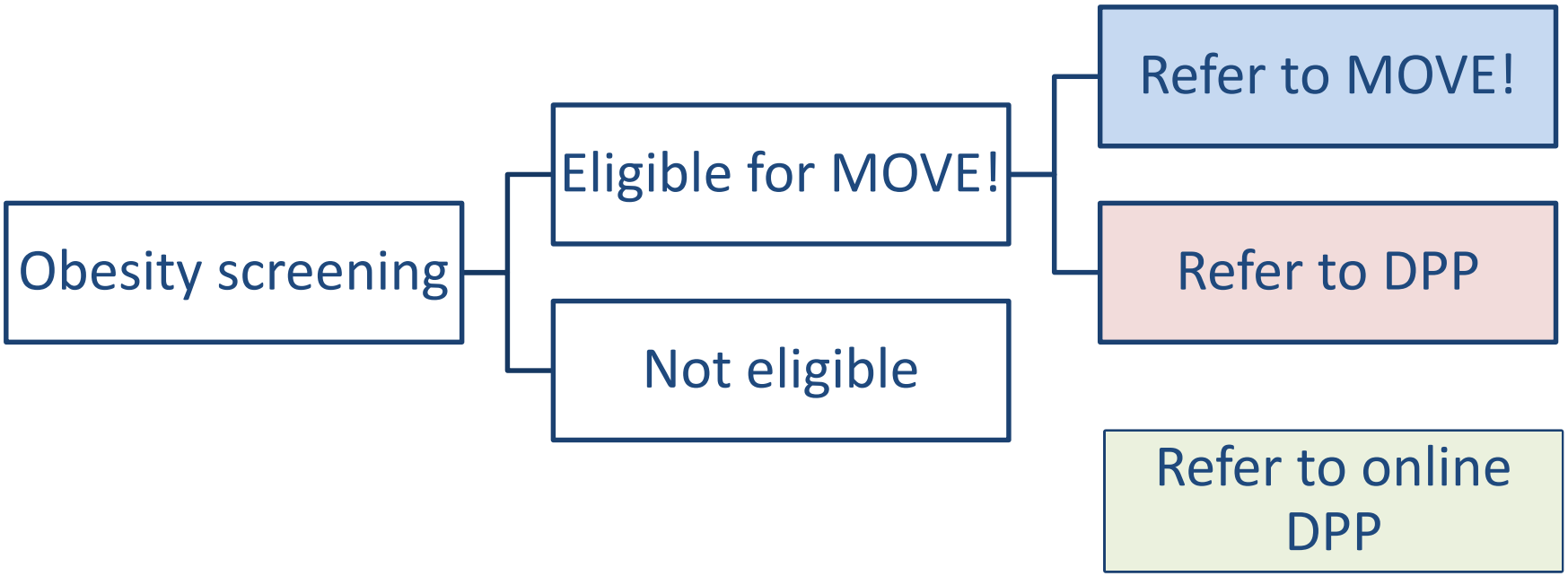
- **Weight?**

Study Objective

Is goal acquisition related to weight loss?

Hypothesis: Among Veterans, assigned goals will be associated with greater weight loss success.

Study Design



Study Arms

MOVE!®	VA DPP	Online DPP
In-person	In-person	Online
Goal: weight loss	Goal: 7% weight loss	Goal: 7% weight loss
8-10 core sessions	16 core sessions	16 core sessions
Multidisciplinary coaching team	Single coach	Single coach
Open cohort	Closed cohort	Closed cohort

MOVE! Weight Management Program for Veterans

National Diabetes Prevention Program

Prevent

Data Sources

Patient questionnaire
(12-month)

- Daily diet goal
- Daily physical activity goal
- Weight loss goal
- Demographics

Clinical data
(Baseline, 12-month)

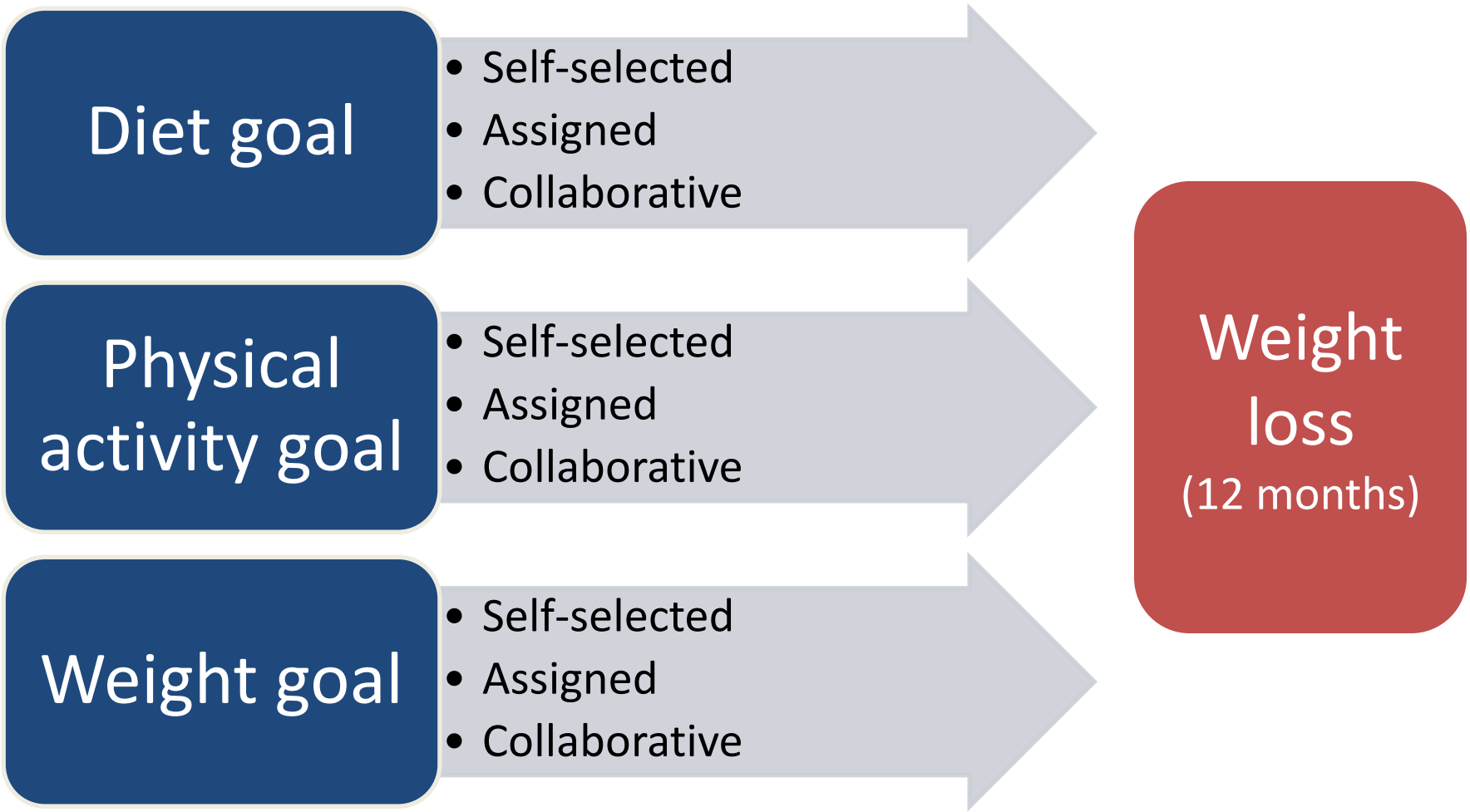
- Baseline weight
- 12-month weight

Measures

"How did you determine your [*daily calorie/ daily physical activity/ weight loss*] goal?"

- I chose this myself *Self-selected*
- My group leader chose this goal *Assigned*
- I worked with my group leader to come up with this goal *Collaborative*

Primary Predictors and Outcome



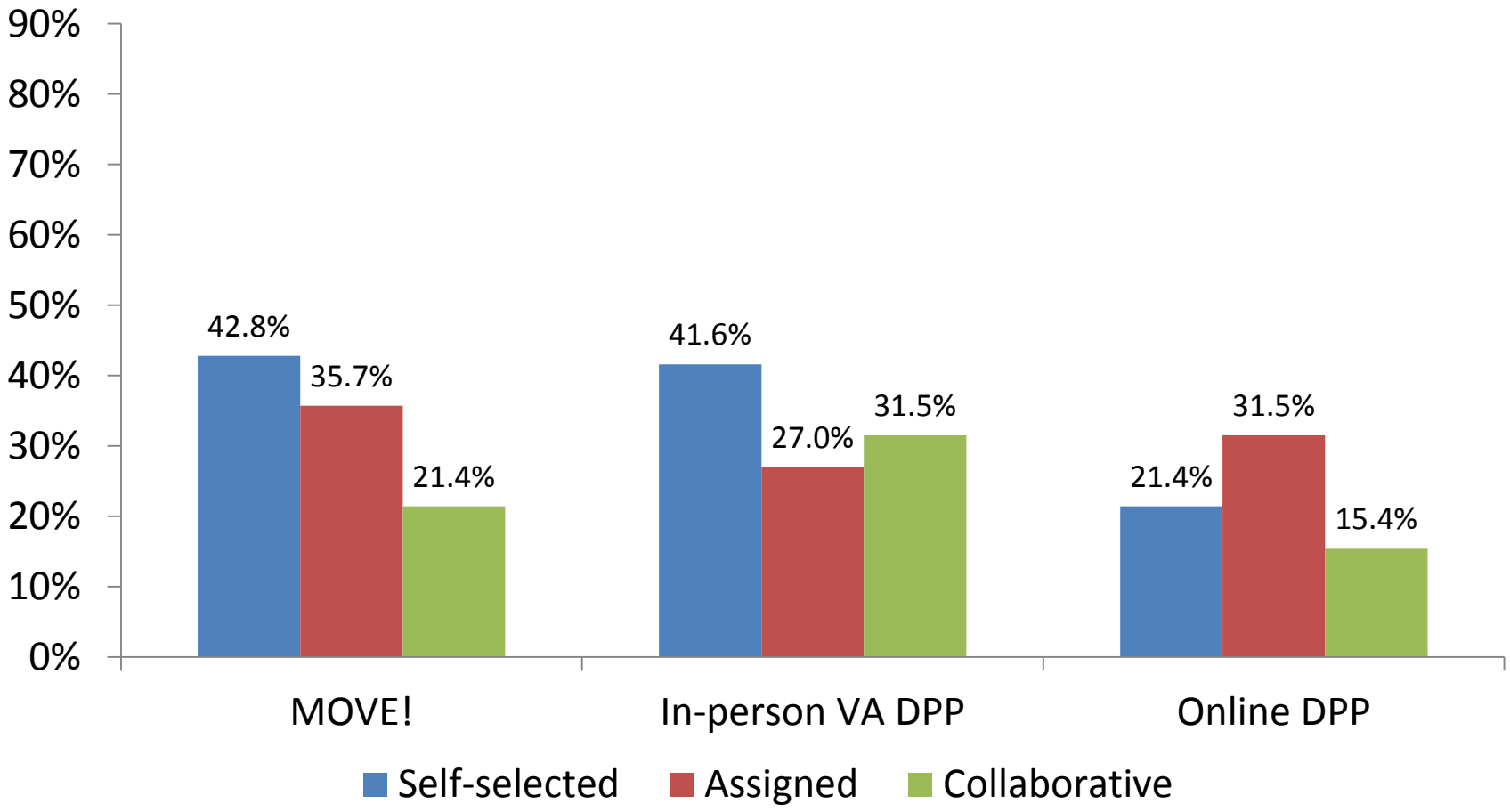
Data Analysis

Linear regression	Goal type (self-selected, assigned, collaborative)
	Study arm
	Sex
	Age
	Baseline weight
	Race/ethnicity
Predictive margins and pairwise comparison	Goal type (self-selected, assigned, collaborative)

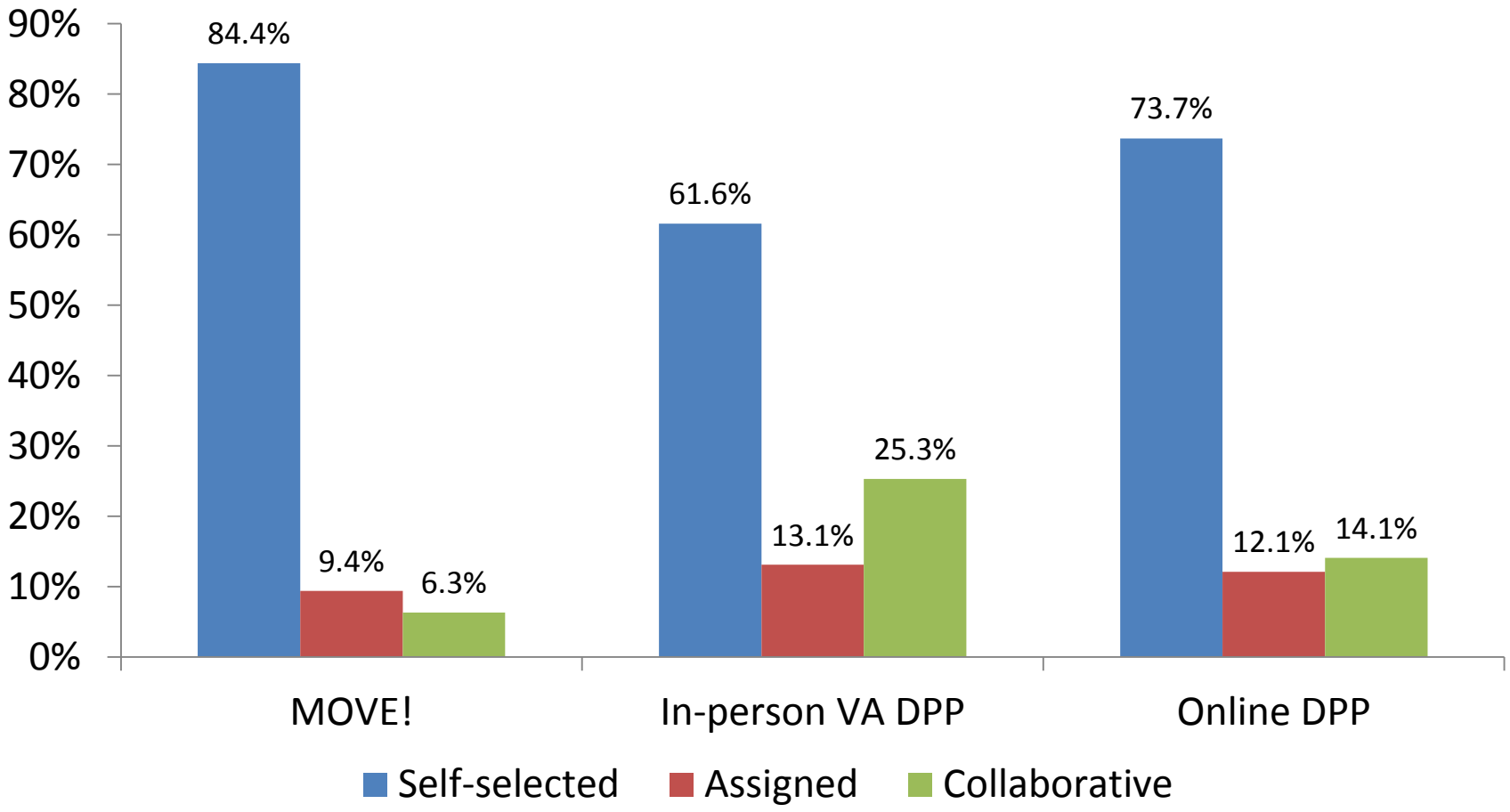
Sample Characteristics

	Total (N=385)	MOVE! (n=55)	In-person VA DPP (n=146)	Online DPP (n=184)	*p*-value
	N (SD)	N (SD)	N (SD)	N (SD)	
Age (years)	59.8 (9.9)	59.2 (9.6)	59.3 (9.0)	60.3 (10.7)	0.60
Baseline BMI (kg/m^2)	34.4 (5.7)	34.1 (4.4)	35.8 (5.7)	33.6 (5.8)	**0.003**
Female	91 (23.6%)	5 (9.1%)	19 (13.0%)	67 (36.4%)	**<0.001**
Race/ethnicity					**0.004**
Non-Hispanic White	216 (59.2%)	21 (42.9%)	78 (56.1%)	117 (66.1%)	
Non-Hispanic Black	90 (24.7%)	19 (38.8%)	42 (30.2%)	29 (16.4%)	
Other	59 (16.2%)	9 (18.4%)	19 (13.7%)	31 (17.5%)	

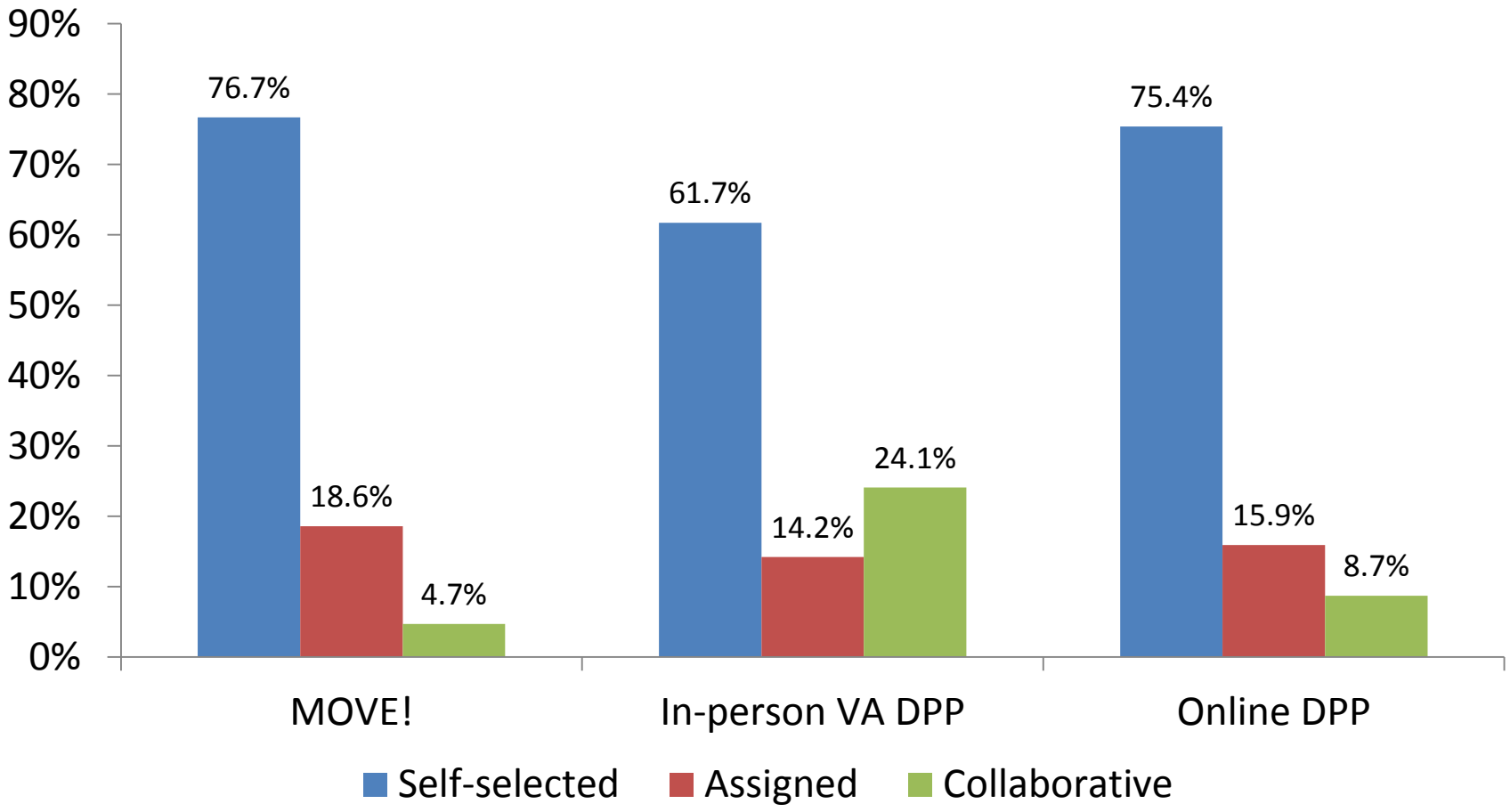
Diet Goals


90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
42.8%
35.7%
21.4%
41.6%
27.0%
31.5%
21.4%
31.5%
15.4%
MOVE!
In-person VA DPP
Online DPP
Self-selected
Assigned
Collaborative

Physical Activity Goals



Weight Loss Goals



Diet Goal and Weight Loss

n=77	β (SE)	*p-value*
Diet goal type		
Self-selected	*Ref*	*Ref*
Assigned	-4.81 (6.16)	0.438
Collaborative	6.11 (5.48)	0.268
Study arm		
MOVE!	*Ref*	*Ref*
In-person VA DPP	-11.44 (7.93)	0.154
Online DPP	-14.04 (8.89)	0.119
Female	-2.71 (6.25)	0.666
Age	-0.32 (0.28)	0.259
Baseline weight	-0.04 (0.06)	0.447
Race/ethnicity		
Non-Hispanic White	*Ref*	*Ref*
Non-Hispanic Black	9.13 (5.66)	0.111
Other	2.48 (6.22)	0.691

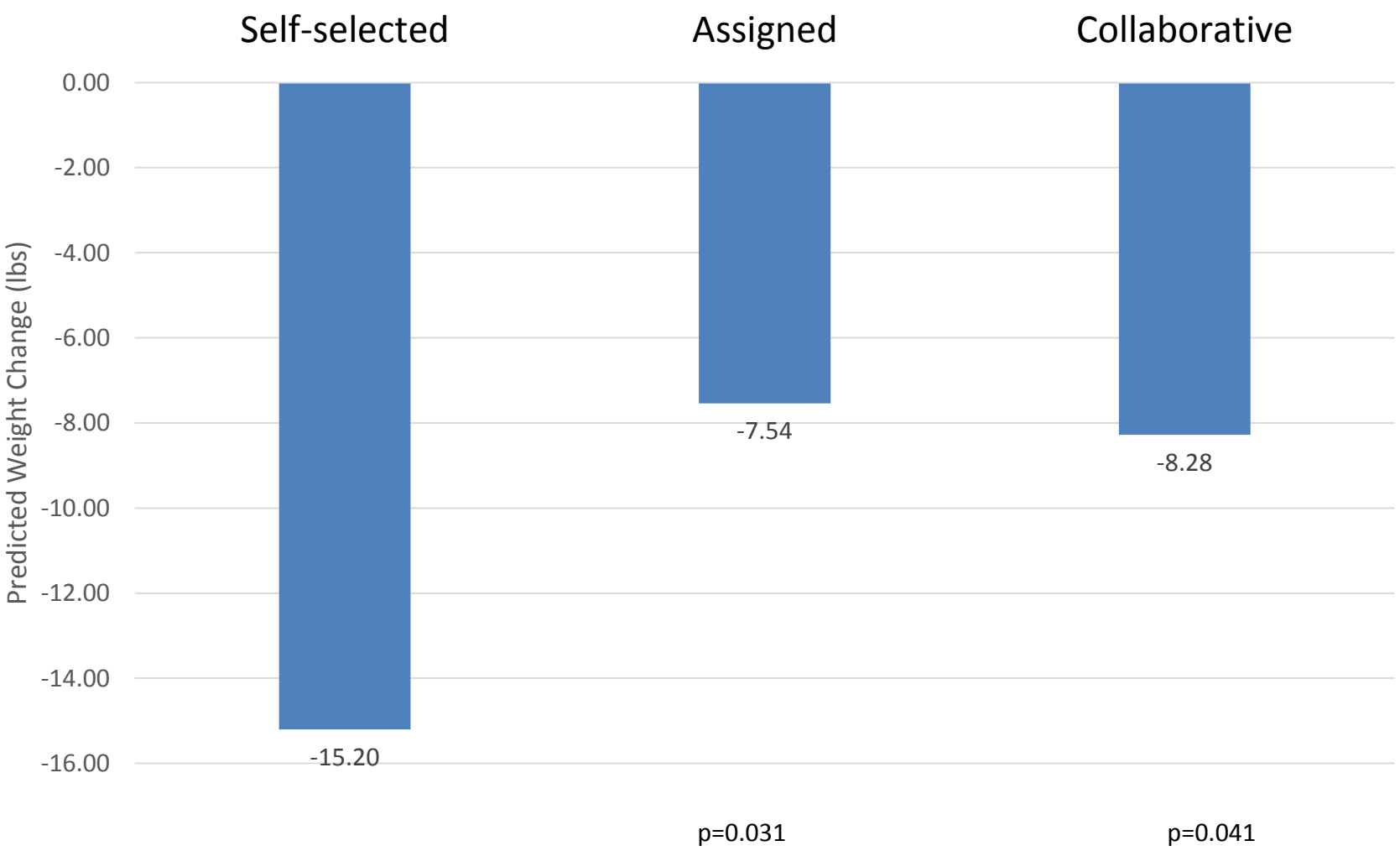
Physical Activity Goal and Weight Loss

N=142	β (SE)	*p-value*
PA goal type		
Self-selected	*Ref*	*Ref*
Assigned	-1.14 (4.39)	0.795
Collaborative	3.81 (3.80)	0.318
Study arm		
MOVE!	*Ref*	*Ref*
In-person VA DPP	-8.21 (5.30)	0.124
Online DPP	-7.34 (5.17)	0.158
Female	-0.68 (3.86)	0.860
Age	-0.13 (0.17)	0.447
Baseline weight	-0.02 (0.04)	0.498
Race/ethnicity		
Non-Hispanic White	*Ref*	*Ref*
Non-Hispanic Black	5.50 (3.81)	0.151
Other	6.12 (4.48)	0.174

Weight Goal and Weight Loss

N=191	β (SE)	*p-value*
Weight goal type		
Self-selected	*Ref*	*Ref*
Assigned	**7.66 (3.53)**	**0.031**
Collaborative	**6.92 (3.37)**	**0.041**
Study arm		
MOVE!	*Ref*	*Ref*
In-person VA DPP	**-9.26 (4.24)**	**0.031**
Online DPP	-7.88 (4.13)	0.058
Female	-1.79 (3.34)	0.593
Age	-0.14 (0.14)	0.347
Baseline weight	**-0.09 (0.03)**	**0.004**
Race/Ethnicity		
Non-Hispanic White	*Ref*	*Ref*
Non-Hispanic Black	4.89 (3.30)	0.140
Other	3.11 (3.39)	0.361

Mean Weight Loss by Goal Types



Summary of Results

Most reported self-selected goals

- Even in programs with assigned goals

Goal acquisition associated with weight outcomes

- Greater weight loss with self-selected weight goals

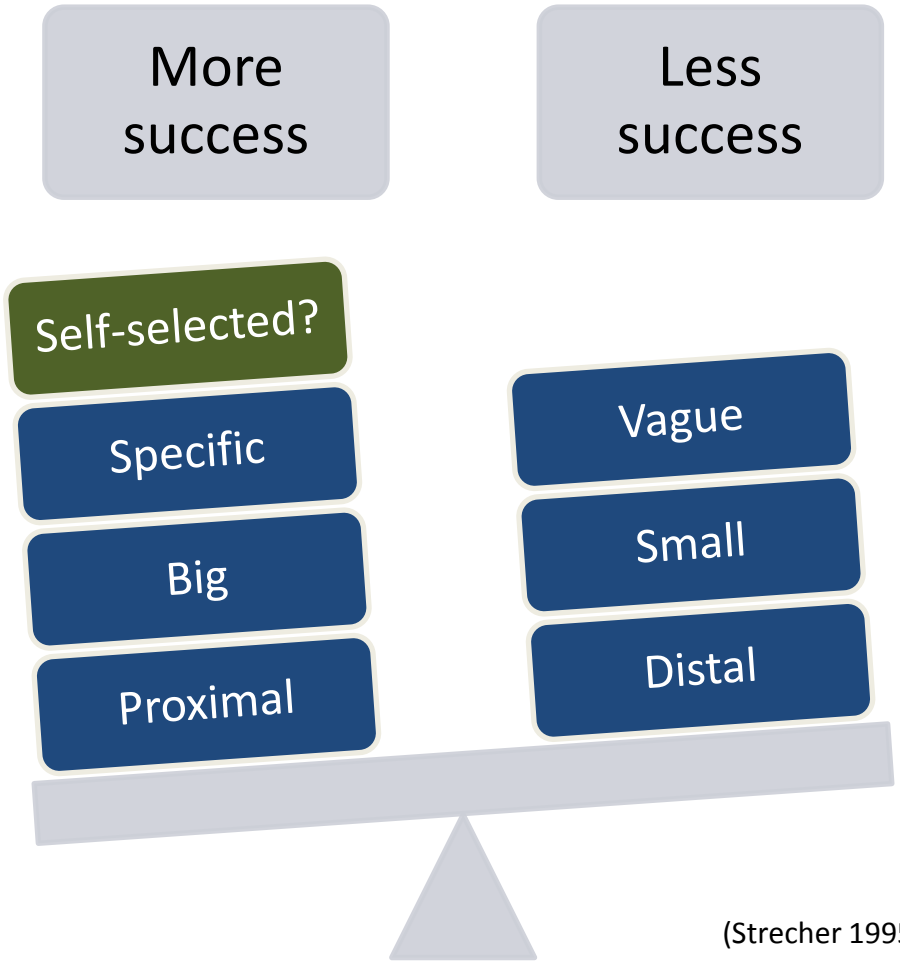
Program Delivery Fidelity

- Separate evaluation assessed different domains of program delivery, including goal setting

	MOVE! (n=34)	In-person VA DPP (n=37)	*p*-value
Group leader presented standardized goals to the participants and asked them to commit to a goal (i.e., everyone had the same goal to complete the following week) *1=strongly disagree, 7=strongly agree*	3	6	<0.001

Damschroder LJ, Reardon CM, AuYoung M, et al. Evaluation of the VA Diabetes Prevention Program Clinical Demonstration (VA-DPP) in Veterans Health Administration (VHA) Medical Centers: Implementation Findings. Under review.

Goal Setting and Weight Loss



(Strecher 1995, Durant et al., 2013; Pearson 2011)

Conclusions

- **Goal acquisition and weight loss**
  - Greater weight loss associated with perceiving goal as self-selected
  - May be related to goal size (effort) and motivation

- **Future studies**
  - Explore how patients perceive goals over time
  - Goal acquisition of diet and physical activity goals relative to those behaviors

Funding

- *PIs: Caroline Richardson, Laura Damschroder*

- VA QUERI
  - RRP 12-440
  - SDP 12-549

- VA Clinical QI Funding
  - XVA 41-048

Co-Collaborators

- Laura Damschroder
- Maria Hughes
- Tracey Rosen
- Bradley Youles
- Rob Holleman
- Tannaz Moin
- Caroline Richardson

Acknowledgments

- National Center for Health Promotion and Disease Prevention (NCP)/ MOVE! Program
- VA HSR&D
- VA Diabetes QUERI
- Diabetes Prevention Support Center (GLB Program)
- Omada Health
- VA Ann Arbor Center for Clinical Management Research (CCMR)
- Durham VA Medical Center
- Clinical Demonstration Sites
  - VA Baltimore Medical Center
  - VA Greater Los Angeles Healthcare System
  - VA Minneapolis Healthcare System

Thank you!

Questions?

Contact Information:

Mona AuYoung: mona.auyoung@va.gov