Characteristics of Local YMCAs That are Early Adopters of a Senior Exercise Program

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Presenter Disclosures

The Objective

Describe site and participant characteristics

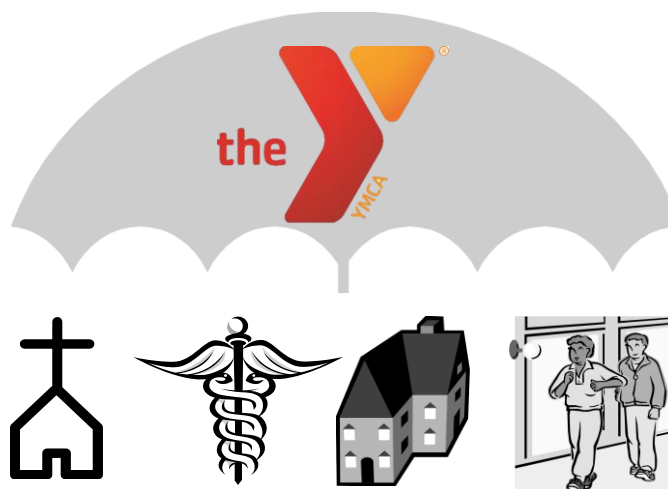Model participant outcomes as a function of site type

The Program

The Reach

The Partnership

The YMCA

The Methods

Data	• Program records from 2005-2011 • Demographics and function test results
Participants	• 2,322 participants • 101 program sites in 16 states
Physical Function Tests	• Chair Stand Repetitions • Arm Curl Repetitions • 8-Foot Timed Up-and-Go

The Models

Outcome: Physical Function Test Result	• Baseline test result • Follow-up test result • Delta baseline to follow-up
Predictor: YMCA-Affiliated Site Type	• YMCA (ref) • Residential • Other • Faith-based • Social Service • Healthcare • Senior Center
Covariates	• Gender • Arthritis • Age • Comorbid Conditions • Caucasian • Site Clustering

The Sample

72	Average participant age
82%	Female Participants
54%	Caucasian participants
29%	Participants with arthritis Participants with hypertension
12%	Participants with diabetes

The Results

16.5
(baseline)
18.1
(follow-up)

12.1

13.5

9.2

8.9

Photo credit: Chair stand, http://nihseniorhealth.gov/exerciseandphysicalactivity/howtostayactive/checkyourprogress/images/chairstand.jpg
Timed up and go, http://toolboxes.flexiblelearning.net.au/demosites/series8/805/fit_tb/fit011_1_lr10/fit011_1_lr10_1_7.htm

The Results

Test Results as a Function of Delivery-Site Type
(b, p-value)

| | YMCA | Residential Site | |
		Baseline	Follow-Up
Chair Stand	Reference	*-1.40 (0.03)*	*-1.89 (0.05)*
Arm Curls	Reference	-0.10 (0.92)	0.58 (0.69)
Up-And-Go	Reference	*2.57 (0.03)*	*2.76 (0.05)*

So What?

Tailoring

Fidelity

Results

Looking Ahead

National Dissemination
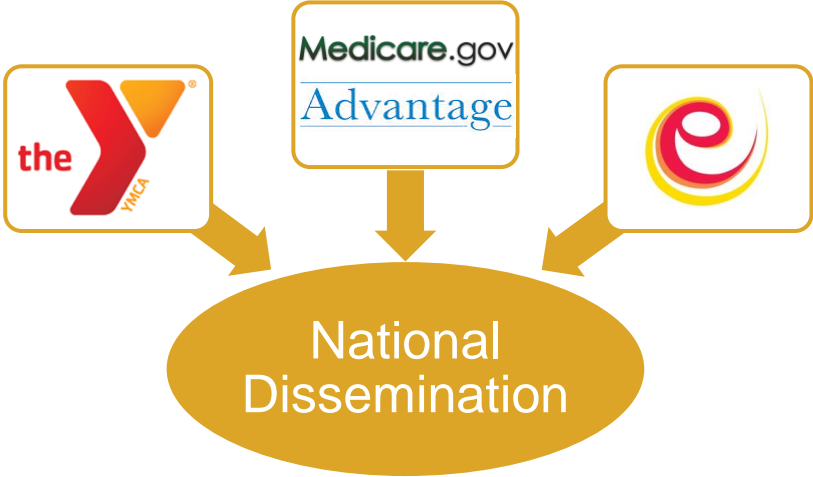
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THANK YOU

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Table 1a: Baseline Physical Function Test Results by Site Type, Mean (SD)

	Mean (SD) Physical Function Test Outcomes							
	All	YMCA (n=673)	Faith-Based Organization (n=141)	Healthcare Organization (n=20)	Social Services Organization (n=52)	Residential Site (n=178)	Senior Center (n=246)	Other (n=45)
Chair Stand (n=1,321)	12.06 (4.17)	12.55 (4.06)	12.29 (4.32)	9.40 (2.35)	12.84 (4.54)	10.78 (3.86)	11.29 (4.28)	13.67 (4.03)
Arm Curls (n=1,355)	16.54 (5.93)	16.73 (6.20)	16.72 (6.91)	14.10 (2.88)	16.87 (3.96)	16.32 (5.52)	15.67 (5.30)	19.53 (5.12)
Up-And-Go (n=1,323)	9.21 (6.50)	8.02 (6.31)	7.82 (3.89)	10.70 (3.06)	7.48 (4.22)	11.30 (6.56)	11.69 (7.84)	10.69 (3.92)

Table 1b: Follow-Up Physical Function Test Results by Site Type, Mean (SD)

	Mean (SD) Physical Function Test Outcomes							
	All	YMCA (n=248)	Faith-Based Organization (n=51)	Healthcare Organization (n=15)	Social Services Organization (n=20)	Residential Site (n=85)	Senior Center (n=128)	Other (n=21)
Chair Stand (n=564)	13.47 (4.67)	13.93 (4.13)	15.21 (4.00)	10.13 (2.59)	18 .00 (4.90)	11.35 (4.91)	12.76 (4.98)	14.90 (4.25)
Arm Curls (n=567)	18.06 (5.69)	17.50 (5.63)	21.61 (5.51)	13.07 (4.06)	20.20 (4.53)	17.60 (6.10)	18.23 (5.52)	18.43 (3.36)
Up-And-Go (n=563)	8.93 (5.95)	7.73 (5.37)	6.80 (3.34)	9.27 (1.75)	5.00 (1.11)	11.09 (7.32)	10.87 (6.64)	10.81 (4.23)

Table 2a: Regression Models of Baseline Chair Stand, Arm Curl Reps and Up-and-Go as a Function of Delivery-Site Type (b, p-value)

Chair Stand	YMCA	Faith-Based Organization	Healthcare Organization	Social Services Organization	Residential Site	Senior Center	Other
Adjusted model with clustering	Reference	-0.22 (0.69)	-4.42 (<0.001)	-0.59 (0.65)	*-1.40 (0.03)*	-0.89 (0.20)	1.15 (0.03)
Arm Curls							
Adjusted model with clustering	Reference	-0.016 (0.90)	-5.04 (<0.01)	-1.26 (0.22)	-0.1 (0.92)	-0.91 (0.35)	2.75 (0.002)
Up-And-Go							
Adjusted model with clustering	Reference	-0.39 (0.57)	4.19 (<0.01)	0.36 (0.87)	*2.57 (0.03)*	2.88 (0.02)	2.58 (<0.01)

Table 2b: Regression Models of Follow-Up Chair Stand, Arm Curl Reps and Up-and-Go as a Function of Delivery-Site Type (b, p-value)

Chair Stand	YMCA	Faith-Based Organization	Healthcare Organization	Social Services Organization	Residential Facility	Senior Center	Other
Adjusted model with clustering	Reference	1.66 (0.05)	-4.69 (<0.01)	3.05 (<0.01)	*-1.89 (0.05)*	-0.03 (0.77)	1.55 (0.01)
Arm Curls							
Adjusted model with clustering	Reference	4.29 (0.01)	-6.12 (<0.01)	1.69 (0.22)	0.58 (0.69)	1.16 (0.38)	1.00 (0.25)
Up-And-Go							
Adjusted model with clustering	Reference	-1.04 (0.21)	1.85 (0.09)	-2.12 (0.02)	*2.76 (0.05)*	2.29 (0.08)	3.03 (<0.01)