

# Influence of Disability and Disease on Chronic Disease Self-Management Education (CDSME) Program Attendance

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## INTRODUCTION

- Over the next several decades, the number of older Americans will increase substantially
  - More people will be living longer with co-morbid conditions
  - Self-care behaviors can compensate for, or delay, physical limitations & chronic conditions progression
  - Implications for healthcare costs

### An Emphasis on Evidence-Based Public Health

- Increase access to evidence-based health promotion programs (EBP)
- Identify essential programmatic elements for success
- Focus on implementation & dissemination issues
  - Expanding programs 'to scale'
  - Recruiting & retaining diverse participants
  - Ensuring fidelity & cost-effectiveness

### Limitations, Disabilities, and Chronic Conditions

- Nearly 90% of older adults having one or more chronic conditions, and nearly 73% having two or more
  - Increasing the odds of functional limitations & disability
- Less is known about the reach and utilization of evidence-based disease prevention programs among those with physical, mental, and emotional disabilities

## STUDY PURPOSES

- Identify personal characteristics of participants with functional limitations who attended CDSME workshops
- Examine the influence of self-reported functional limitations and chronic disease on successful program completion (i.e., attending 4+ of 6 offered sessions)

## METHOD

- Data from a nationwide delivery of CDSMP from 2013-2016
  - Initiated as part of the American Recovery and Reinvestment Act (ARRA) in 2009
  - Delivered in 36 states, Washington DC, & Puerto Rico

### Chronic Disease Self-Management Education (CDSME)

- Class-based, behavioral intervention to develop skills & improve confidence to self manage chronic conditions
  - Shown to improve health indicators & healthcare utilization in a randomized control trial
- 6 sessions; each lasting 2.5 hours; held over 6 weeks
  - Most offered in English & Spanish
- Facilitated by 2 trained leaders (preferred at least 1 is a non-health professional & 1 has a chronic disease)
- Delivered in a variety of community settings through the aging services network & public health system
- For additional information: <https://www.selfmanagementresource.com/programs>

### Measures

- Dependent Variable
  - Are you limited in any way in any activities because of physical, mental, or emotional problems? (yes, no)
- Personal Characteristics
  - Age; Sex; Race; Ethnicity; Education; Self-reported chronic conditions; Living situation; Residential rurality
- Delivery Site & Workshop Characteristics
  - Site type; Class size
  - Workshop language (English or Spanish)
  - "Successful" Completion (attending 4+ of 6 sessions)

### Statistical Analyses

- Pearson's chi-squared tests for categorical variables
- Independent sample t-tests for continuous variables
- Binary logistic regression

## RESULTS

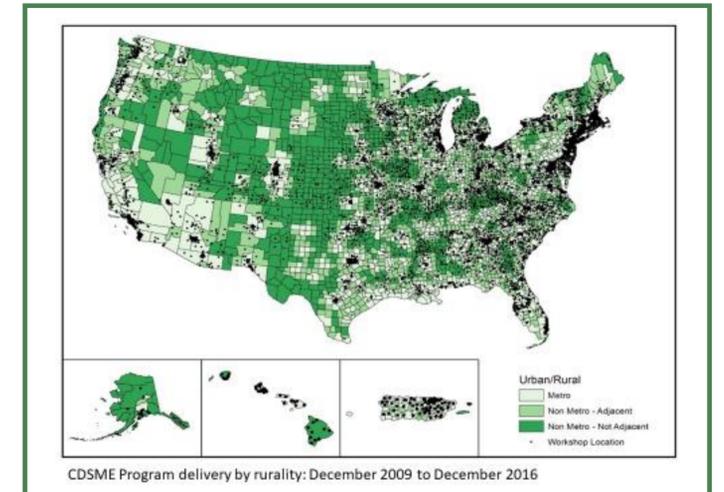
- Data were analyzed from 73,101 adult participants
- 46.0% had physical/mental/emotional limitation
- On average, 64.7 ( $\pm 15.5$ ) years old
- 75.3% were female
- 65.0% were non-Hispanic white; 20.4% African American; 13.1% Hispanic
- On average, 2.6 ( $\pm 1.7$ ) self-reported chronic conditions
  - 66% heart disease; 41% arthritis; 40% diabetes; 21% chronic pain; 20% lung disease; 12% cancer
- 25% of workshops delivered in healthcare organizations;
  - 21% senior centers/AAA; 19% residential facilities; 13% community/multi-purpose centers; 8% faith-based organizations
  - 61% attended workshops delivered in English
- On average, class sizes of 13.7 ( $\pm 7.1$ ) participants
- 74.3% successfully completed workshops

### Bivariate Analyses

- Relative to those without limitations, those with limitations:
  - Older; more chronic conditions
  - More chronic pain; arthritis; anxiety/depression; lung disease

### Binary Logistic Regression

- Among all participants, interaction effect between self-reported limitations and chronic disease was associated with *non-successful completion* (OR=0.96, P<0.001)
- Among participants reporting limitations (n=33,601), *successful completion* was associated with:
  - Older (OR=1.01, P<0.001)
  - Female (OR=1.12, P<0.001)
  - More educated (OR=1.26, P<0.001)
  - Resided in rural areas (OR=1.10, P=0.007)
  - Lived with others (OR=1.07, P=0.010)
  - Had fewer chronic conditions (OR=0.97, P<0.001)



Factors associated with successful completion (those with limitations)

	P	OR	95% CI	
			Lower	Upper
Age	<0.001	1.00	1.00	1.01
Sex: Male	--	--	--	--
Sex: Female	<0.001	1.12	1.05	1.18
Hispanic: No	--	--	--	--
Hispanic: Yes	0.632	1.02	0.93	1.13
Race: White	--	--	--	--
Race: African American	<0.001	1.37	1.27	1.47
Race: Asian/Pacific Islander	<0.001	1.50	1.23	1.83
Race: American Indian/Alaska Native	0.614	1.05	0.87	1.26
Race: Hawaiian Native	0.001	2.46	1.47	4.11
Race: Other/Multiple	0.116	1.09	0.98	1.22
Education: Less than High School	--	--	--	--
Education: High School /GED	0.468	0.97	0.89	1.06
Education: Some College / Technical	0.927	1.00	0.92	1.08
Education: College Graduate+	<0.001	1.26	1.15	1.38
Lives with Others: No	--	--	--	--
Lives with Others: Yes	0.010	1.07	1.02	1.13
Rurality: Metro	--	--	--	--
Rurality: Non-Metro	0.007	1.10	1.03	1.18
Number of Chronic Conditions	<0.001	0.97	0.96	0.99
Workshop Language: Non-English	--	--	--	--
Workshop Language: English	0.834	0.99	0.94	1.05
Number of Participants Enrolled in Workshop	<0.001	0.93	0.93	0.93

## CONCLUSIONS

- Adults with limitations and more complex disease profiles were less likely to successfully complete CDSME workshops
- Efforts are needed to embed CDSME in organizations that reach and serve adults with disability
  - Inclusion of diverse entities with common missions
  - NCOA-led Disability & Aging Collaborative

