

Webinar Instructions

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- If you want to ask a question, please type in your question into the box.



National Study of Chronic Disease Self-Management Programs (CDSMP)*

Presenters

Nancy Whitelaw, PhD

Kate Lorig, DrPH

Matthew Lee Smith, PhD, MPH, CHES

Marcia Ory, PhD, MPH

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Overview

- Introductions
- Study Design
- Workshop Characteristics
- 12 Month Outcomes
- Questions and Discussion

Nancy Whitelaw

Kate Lorig

Matthew Smith

Marcia Ory

All

National CDSMP Study

What Did We Do?

Presented by Kate Lorig, DrPH

<http://patienteducation.stanford.edu>

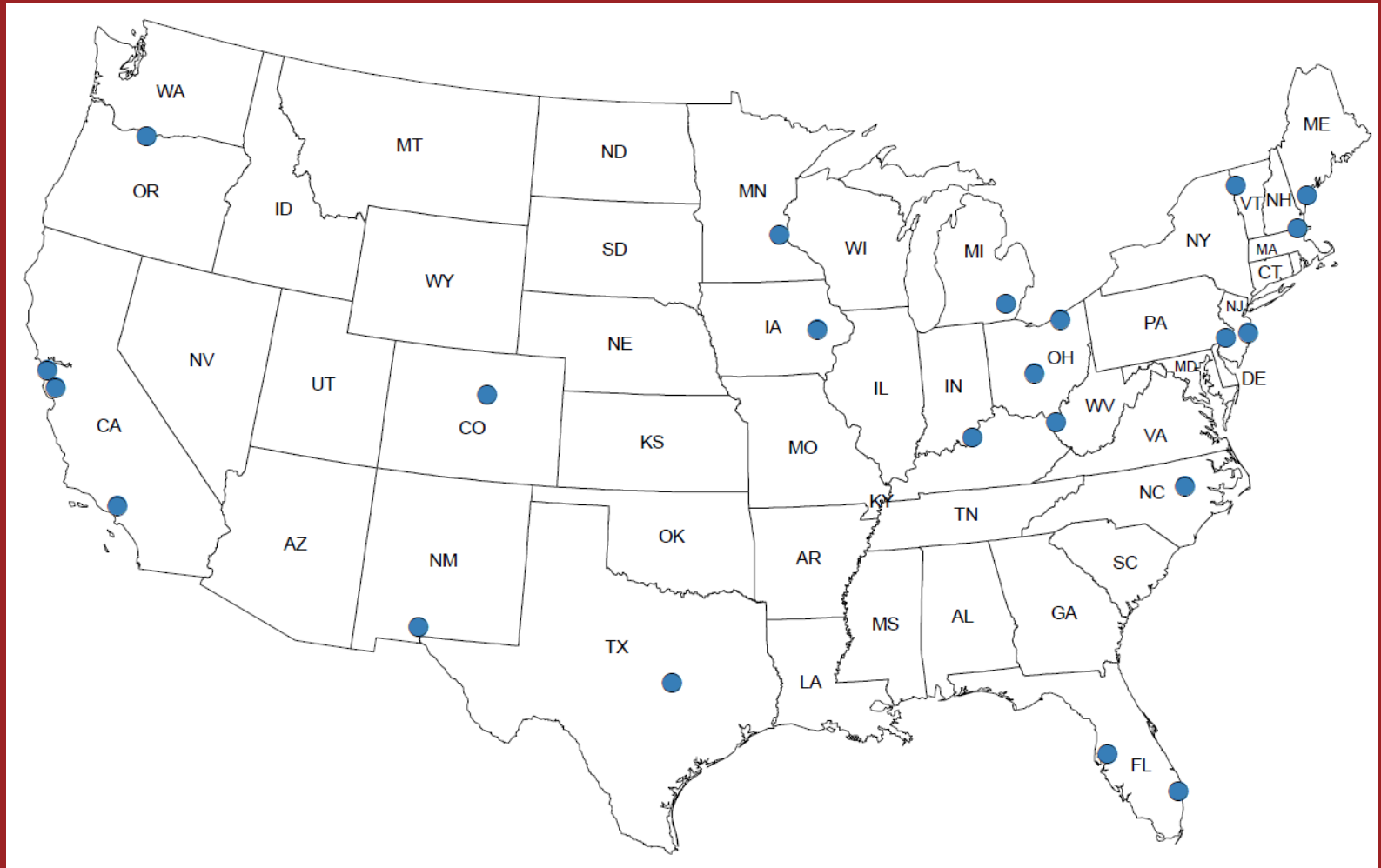
Study Site Selection

- ❖ *Affiliated with the AoA Communities Putting Prevention to Work Initiative.*
- ❖ Gave six or more CDSMP/Tomando workshops in the past 12 months.
- ❖ Past average workshop completion rate of 66%.
- ❖ Planned to deliver six workshops in coming year.

Site Selection

- ❖ 39 sites met criteria and were randomly ordered.
- ❖ Sites were invited to participate by randomized order.
- ❖ 32 sites were asked—22 accepted.

22 Locations in the National Study



Study Population

- ❖ Each site was asked to provide 50 participants to the study.
- ❖ Participants provided by sites ranged from 14 to 87 (mean 54).
- ❖ Workshop completion rate was 79%.

**Follow-up data were collected
at 6 and 12 months.**


- ❖ All study participants (not just completers) were followed.**
- ❖ 77% completed 6-month data.**
- ❖ 71% completed 12-month data.**

Time of Data Collection

- ❖ **Baseline data collected over 8 months.**
- ❖ **Follow-up data collected over 11 months.**
- ❖ **Total data collection time was 19 months.**

How were outcome measures chosen?

- ❖ **Health Status, Health Behaviors, Utilization**
- ❖ **Validity and Reliability**
- ❖ **Sensitivity to Change**
- ❖ **Brevity**



Nationwide Study of Chronic Disease Self-Management Programs (CDSMP)

Workshop Characteristics

Presented by Matthew Lee Smith, PhD, MPH, CHES

What We Wanted To Know About National Study Workshops

- Who funded the workshops?
- What kinds of organizations delivered the workshops?
- What were some basic aspects of workshop delivery?
- Who were leading the workshops?

National Study: Workshop Funding

- Funding source for workshops in national study:
 - 54% AoA ARRA
 - 12% AoA Older American Act funds
 - 11% Foundation/philanthropy
 - 9% Centers for Disease Control and Prevention
 - 8% AoA Evidence-based Prevention Grant

National Study: Workshop Delivery Sites

- Delivery site:
 - 21% senior center
 - 19% residential facility
 - 15% healthcare organization
 - 13% community center
 - 6% faith-based organization
 - 5% social services office
 - 20% other (e.g., non-profit organization, sports club)

National Study: Workshop Characteristics


- 145 workshops; 22 sites
- 83% CDSMP; 17% Tomando
- On average, 12 participants per workshop
- 79% of participants successfully completed (attended 4+ sessions)
- 12% led by 2 master trainers; 55% led by 2 lay leaders

National Study: Leader Characteristics

- Leaders had facilitated 4 workshops in past 2 years
- 89% female
- 30% age 45-59; 31% age 60+
- 66% Caucasian; 21% Hispanic; 10% African American
- 70% had one or more chronic condition
- 47% staff; 34% paid volunteer; 19% unpaid volunteer

Questions for the Future

- Does type of setting impact completion rates or participant outcomes?
- Does class size impact completion rates or participant outcomes?
- Do leader characteristics impact completion rates or participant outcomes?



Nationwide Study of Chronic Disease Self-Management Programs (CDSMP)

12-Month Participant Outcomes

Presented by Marcia Ory, PhD, MPH

Main Outcome Research Questions for the National Study

- How does CDSMP affect the lives of participants and society as a whole?
- What are the impacts on:
 - Symptom management and lifestyle behaviors?
 - Better care?
 - Improved health?
 - Reduced health care costs?

National Study Methods

- Study Participants
 - Baseline (n=1,170), 12 month (n=825)
- Measures
 - Symptom management and lifestyle behaviors: Pain, fatigue, shortness of breath, stress, pain, physical activity
 - Better Care: Communication with MD, medication compliance, health literacy
 - Better Health: Self-assessed health, depression, quality of life, unhealthy physical/mental days
 - Lower Health Care Cost: ER visits, Hospitalization

National Study Methods

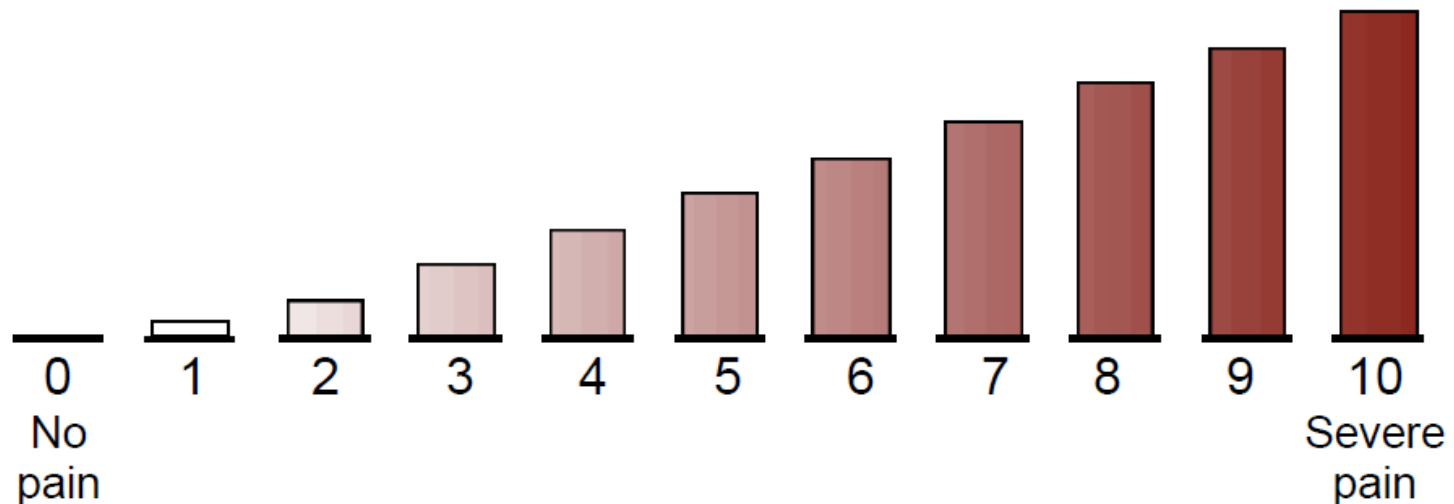
- Statistical analyses
 - Examining change at baseline and 12-month follow-up controlling for key socio-demographics and chronic conditions
 - Analytical models appropriate to type variables
 - Findings in terms of percent improvement or adjusted ratios
- This is a quick “at a glance” version. We will post a second version with more of the statistical methods described.

Characteristics of National Study Participants Over Time

	Baseline (n=1,170)	12-month (n=825)
Gender (% female)	967 (83%)	678 (82%)
Age (yrs)	65.4 (\pm 14.3)	66.7 (\pm 13.0)
Education (yrs)	12.9 (\pm 3.8)	13.0 (\pm 3.9)
Race/ethnicity		
Non-Hispanic white	645 (55%)	475 (58%)
African American	187 (16%)	125 (15%)
Latino/Hispanic	260 (22%)	175 (21%)
Asian / Pacific Islander	34 (3%)	22 (3%)
American Indian / Alaska Native	8 (1%)	4 (1%)
Number of comorbidities	3.0	3.0
Workshop completion rate (4+ sessions)	925 (79%)	695 (84%)

Example of Analogue Scale

We are interested in learning whether or not you are affected by pain. Please **circle** the number below that describes your **pain** in the **past week**:



Impact on Symptom Management

On a "0-10" analogue scale	Baseline Mean	12-month Mean	% Improvement†
Fatigue ↓	4.9	4.4	10%**
Pain ↓	4.6	4.1	11%**
Shortness of breath ↓	2.7	2.3	14%**
Stress ↓	4.2	3.9	5%*
Sleep problems ↓	4.6	3.7	16%**

Notes. † These statistics control for covariates gender, age, race/ethnicity, education, number of chronic conditions.

↑ Indicates that larger scores are better for this measure

↓ Indicates that smaller scores are better for this measure.

** $p < 0.01$, * $p < .05$

Impact on Physical Activity

Average weekly minutes physically active	Baseline	12-month	Adjusted ratio†
Any time moderately active ↑	66%	72%	1.41**
Total minutes moderately active among those engaged in moderate activity ↑	166.0	173.7	1.04

Notes. † Odds Ratio or Mean Ratio after controlling for covariates gender, age, race/ethnicity, education, number of chronic conditions.

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Does CDSMP Facilitate the Triple Aim Goals?

- Better Care: improving the experience of care
- Better Health: improving population health
- Lower Cost: reducing per capita health care costs

*Berwick et al. (2008). The Triple Aim: Care, Health, And Cost. *Health Affairs*.

CDSMP: Better Care

	Baseline Mean	12-month Mean	% Improvement†
Communication with MD (0~5) ↑	2.6	2.9	9%**
Medication compliance (0~1) ↓	0.25	0.21	12%**
Health literacy (Confidence filling out medical forms) (0~4) ↑	3.0	3.1	4%**

Notes. † These statistics control for covariates gender, age, race/ethnicity, education, number of chronic conditions.

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CDSMP: Better Outcomes

	Baseline Mean	12-month Mean	% Improvement†
Self-assessed health (1~5) ↓	3.2	3.0	5%**
PHQ depression (0~3) ↓	6.6	5.1	21%**
Quality of life (0~10) ↑	6.5	7.0	6%**
Unhealthy physical days (0~30) ↓	8.7	7.2	15%**
Unhealthy mental days (0~30) ↓	6.7	5.6	12%**

Notes. † These statistics control for covariates gender, age, race/ethnicity, education, number of chronic conditions.

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CDSMP: Lower Health Care Costs

	Baseline	12-month	Adjusted Ratios†
Percentage with Emergency Room (ER) Visits in the Past 6 Months↓*	18%	13%	0.68**
Number of ER visits among those with any ER visit	1.5	1.4	1.00
Percentage Hospitalized in the Past 6 Months ↓	14%	14%	1.01
Number of hospitalizations among those with any hospitalization	1.4	1.4	1.00

Notes. † Odds Ratio or Mean Ratio after controlling for covariates gender, age, race/ethnicity, education, number of chronic conditions.

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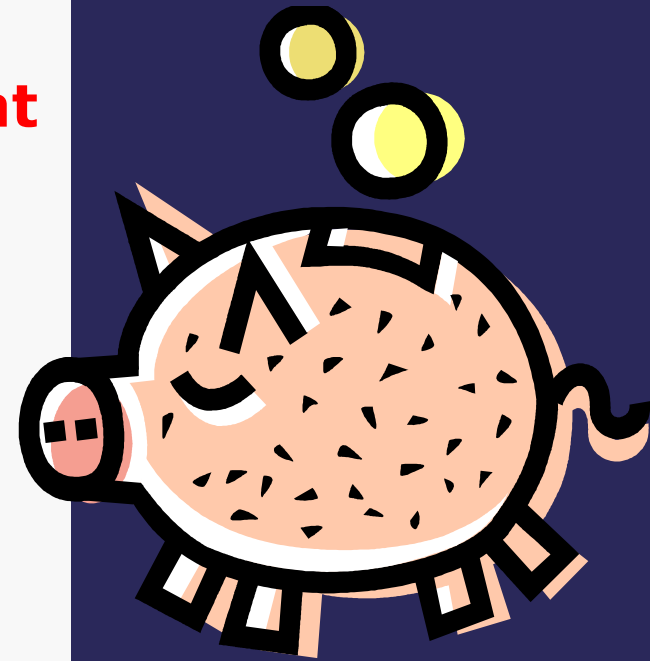
Calculating Potential Cost Savings

- Examine the pattern of health care utilization use
- Identify mean costs from national data (age-adjusted)
- Estimate costs saved from reduced utilization
- Estimate program costs in CDSMP Study
- Deduct program costs for net savings
- Extrapolate to national savings
- Consider study limitations

Estimated Cost Savings Related to Reduced ER Visits & Hospitalization

- **Preliminary Results:**
- **~\$740 per person savings in ER and hospital utilization**
- **~\$390 per person net savings after considering program costs at \$350 per participant**

- **Reaching even 10% of**
- **Americans with one or more chronic conditions would**
- **save ~\$4.2 billion!**



Cost Calculation Limitations

- **Using self-reported data**
 - There are prior studies indicating good concordance between self-reported and actual documented health care utilization but we acknowledge possible misreporting.
- **Generalizing from aggregate national data instead of exact expenses**
 - We employed age-specific estimates but not link specific conditions to reported outcomes.
- **All of our participants were selected based on having a chronic disease**
 - We extrapolate to the US population with chronic conditions although participants' self-reports of chronic conditions are not an exact match to those in national data bases.

Conclusions

- CDSMP is associated with many *positive* improvements in health, health care, and health care costs

Conclusions

- Results are similar to those in the original randomized controlled studies, suggesting a successful translation to real world settings and populations
- Important to ask
 - what makes a program successful in translation?
 - “who benefits” most?



Conclusions

- We need strategies that will help further disseminate and sustain CDSMP across the nation.



Q&A



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