# A Quality Improvement Initiative in Veteran Chronic Disease Self-Management:

# Implications For Improving Patient Outcomes

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# Importance

The deleterious effects of chronic disease can rob individuals of their quality of life while health care costs continue to escalate.

In a needs review of veterans who received health care in 2010, nearly 1/3 had at least 3 chronic conditions (Yoon, Zulman, Scott, & Maciejewski, 2014) accounting for a large share of VHA health expenditures & interventions must be aimed at effective tools in order to meet both the most prevalent & costly conditions (2014).

Optimizing care, while containing health care costs for chronic disease management, is a viable advanced nursing benchmark.

# Background

- The Public Health DNP Nurse Administrator is poised to meet the needs for primary care community health initiatives, including both quality patient care + community-based leadership (Lathrop & Hodnicki, 2014).
- Linked to the **2010 Patient Protection & Affordable Care Act (2012), IOM, 2003, 2011 & the Future of Nursing Report (IOM, 2011)**
- 8.92 million individuals enrolled in the Veterans Health Care System (Department of Veterans Affairs, 2013) with future population estimates surpassing 23 million (National Center for Veterans Analysis & Statistics, 2015).
- The VHA has a clear mission to provide exceptional health care, improve health & well-being, & a vision to target both excellence & value in health care (VHA, 2014).

# Background

- A meta-analysis suggests that chronic disease education delivered in small groups points to moderate expenditures reductions, producing health benefits for participants and proves to be valuable (Brady et al., 2013).
- Bridging an existing successful EBP to an outpatient clinic fills an educational gap for patients.

# Background

- In Virginia, priority needs exist in chronic disease management (Augusta County Community Health Needs Assessment, 2013).
- Approximately 840,000 veterans live in Virginia & account for more than $1,000,000 dollars spent on medical care (Office of the Actuary, 2013).
- In the Staunton, VA CBOC, roughly 16,000 are served (VHA, 2014).
- **Gap analysis** revealed no CDSMP exists in the clinic & the proposed project aimed to benefit veterans by assisting in the self-management of their chronic disease while also improving chronic disease care efficiency (Kahwati et al., 2011).

# Intervention Background

- The Stanford Chronic Disease Self-Management Program (CDSMP) is a small group workshop provided at the community level & led by trained facilitators.
- The program has shown strong results in engaging participants to promote better health, slowing chronic disease progression & spending fewer days in the hospital continuing for as long as 3 years yielding a cost to savings ratio of approximately 1:4 (Lorig, González, & Laurent, 1999).
- Bringing self-management techniques to outpatient veterans with chronic diseases will be one way to enhance their existing care.

QIP's can include small samples, frequent changes in interventions, & adoption of new strategies that appear to be effective (Hughes, 2008) while applying research into practice.

# Project aim(s)

**The main project aim--lower health care utilization rates amongst outpatient veterans.**

Measurable outcomes: Reduced self-reported health care utilization of the past 3 months

- 1.Outpatient visits to physicians
- 2.Visits to emergency departments
- 3.Number of hospitalizations
- 4.Overnight stays in the hospital (Stanford Patient Education Research Center, 2014b)

Self reported improved General Health, Symptoms, Physical Activity, Daily Activities and Medical care

- Additionally, the QIP examined changes in BP, BMI, A1C, & Lipid Panel

# Description of the CDSMP Workshop

- The Mind-Body Connection/Distraction
- Getting a Good Night's Sleep
- Action Plans
- Feedback and Problem Solving
- Dealing with Difficult Emotions
- Physical Activity and Exercise
- Preventing Falls and Improving balance
- Making Decisions
- Pain and Fatigue management
- Endurance exercise
- Relaxation
- Better breathing
- Healthy eating
- Communication Skills

# Methods

- **Ethical principles** guided the use of patient records & the care of patients.
- The study population: **outpatient veterans, aged 54-72, with a chronic disease,** recommended by the clinic RN's, APN or physician.
- **The QIP model, Plan-Do-Study-Act (PDSA) cycle,** guided the veteran clinic project (Hall & Roussel, 2014)
- **Critical personnel** included the PI (this author) & an APN co-investigator.
- Recruitment of **2 qualified CDSMP trainers & 16 patients** who desired the program enough to attend & participate in a 2.5-hour /6-week class
- **IRB approval** from both the University of South Alabama & The Veterans Healthcare Administration, Salem, VA

# Methods

- The Stanford CDSMP intervention examined:
  - participants' knowledge of their chronic condition
  - the purpose of their medication
  - appropriate medication schedules
  - lifestyle modifications
  - need for regular follow up
  - improved self-efficacy
  - improved quality of life
  - improved client family satisfaction
  - self-prescribed weekly goal setting
- Additionally, strategies to exercise, cognitive symptom-management techniques, information on nutrition, fatigue-management, managing emotions, communication, problem solving, and decision-making (Lorig, González & Laurent, 1997).

# Methods

- The National CDSMP (Stanford Patient Education Research Center, 2014a) pretest and posttest were completed by the participants in a paper-pencil questionnaire format.
- Pre and post-laboratory values & biophysical markers (BP, BMI, A1C, & Lipid panel) were collected in chart reviews.

The Stanford Patient Education Research Center (2008) assigns a high degree of confidence to the statement “CDSMP results in reductions in health care expenditures” (p.1).

# Results

- Methods of evaluation for the QIP focused on: Outcome measures that should reflect potential changes due to the intervention (Ogrinc et al., 2015).
- Entered into an SPSS database (descriptive statistical analyses) comparisons from the pretest questionnaire tool including: pre-intervention laboratory + biophysical measurements (chart review) to the

  3-month post-intervention questionnaire tool + repeated laboratory + biophysical measurements (chart review).
- Pretests/Posttests results were calculated on those who completed a minimum of 4/6 workshop sessions (Stanford© completion standard).
- By workshop's end, there were 11 completers (1 outlier)

# Results

Collectively, pre and post comparisons of laboratory values and biophysical measurements had **no** group noteworthy changes.

**However, 1 individual showed marked results:**
**A1C value ↓ from 8.6 to 6.3**
**Triglyceride level ↓from 136 to 93**
**BMI ↓ from 30 to 28.**

# National CDSMP variables at baseline and 3-Months (N = 10)

*Self-Rated Health [General Health] Descriptive Statistics Improvement=decrease*

| | N | Mean |
|---|---|---|
| Pre Recent Health | 10 | 24.9 |
| Post Recent Health | 10 | 23.8 |

*Fatigue, Shortness of Breath & Pain [Symptoms] Descriptive Statistics Improvement=decrease*

| | N | Mean |
|---|---|---|
| Pre Symptoms | 10 | 20.7 |
| Post Symptoms | 10 | 19.8 |

*Exercise Behaviors [Physical Activity] Descriptive Statistics Improvement=increase*

| | N | Mean |
|---|---|---|
| Pre Physical Activities | 10 | 4.8 |
| Post Physical Activities | 10 | 5.1 |

# National CDSMP variables at baseline and 3-Months (n=10)

*Social/ Role Activities Limitations [Daily Activities] Descriptive Statistics Improvement = increase*

| | N | Mean |
|---|---|---|
| Pre Daily Activity | 10 | 9.6 |
| Post Daily Activity | 10 | 10.7 |

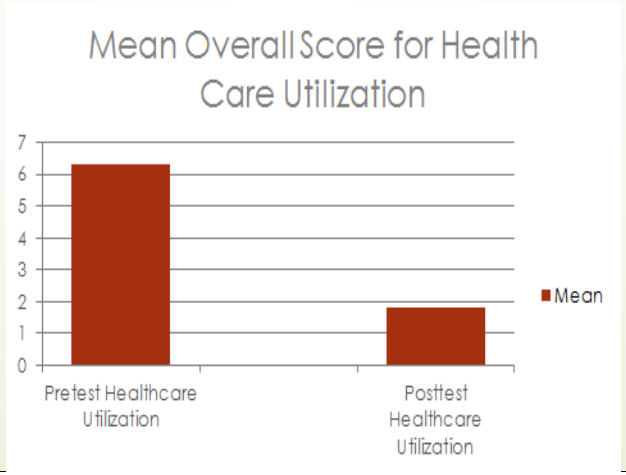
*Communication with Physician [Medical Care] Descriptive Statistics Improvement = increase*

| | N | Mean |
|---|---|---|
| Pre Visit List Question Discussion | 10 | 7.9 |
| Post List Question Discussion | 10 | 8.0 |

# National CDSMP variables at baseline and 3-Months (n=10)

*Healthcare Utilization [Medical Care] Descriptive Statistics Improvement =decrease*

| | N | Mean |
|---|---|---|
| Pre Medical Care Utilization | 10 | 6.3 |
| Post Medical Care utilization | 10 | 1.8 |



# Implications for the CBOC

- A national study of CDSMP effectiveness (22 organizations in 17 states) in reducing healthcare expenditures reveal patient savings= $364/individual including program costs with a national savings of **$3.3 billion if 5% of adults are reached** (Ahn et al., 2015).
- At this rate, with 4 workshops in a year's time (44 separate completers), the CBOC could realize health care utilization savings of approximately **$16,016** over 1 years time.

# Conclusion/Discussion

- Limitations
- Future project sustainability in the clinic is important. The CBOC is in communication with the local program on aging for upcoming grant funded workshops to be held before years end.
- CDSMP also saves enough $$$ through reductions in healthcare expenditures to pay for itself within the 1st year (Stanford Patient Education Research Center, 2008).
- Even small population changes made from CDSMP could save significant healthcare $$$ by avoiding hospitalizations and ED visits (Ahn S, Basu R, Smith ML, Jiang L, Lorig K, Whitelaw N, et al., 2013).

# Disclaimer

- *The contents of this presentation do not represent the views of the Department of Veterans Affairs or the United States Government.*
- *This material is the result of work supported with resources and the use of facilities at the Staunton CBOC affiliated with the Salem, Virginia VA medical facility.*

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