New York State Department of Health Prevention Agenda Workshop: Promoting Evidence-Based Interventions
Overview of Evidence-Based Health Promotion and Disease Prevention Programs
Components of an Evidence-Based Health Promotion/Disease Prevention Programs

- Specific target population
- Specific, measurable goal(s)
- Stated reasoning and proven benefits (research based)
- Well-defined program structure and timeframe
- Specifies staffing needs/skills
- Specifies facility and equipment needs
- Builds in program evaluation to measure program quality and health outcomes
Types of Self-Management Behavior-Change Interventions

- **Chronic Health Condition Focus**
  Educational programs designed to help people develop skills and confidence to manage their health condition

- **Physical Activity Focus**
  Small groups or self-directed interventions where people learn strategies to increase physical activity safely
Why Self-Management Interventions?

- Effective, affordable, and evidence-based
- Convenient: workshops held in community settings
- Developed by university researchers and other reputable groups
- Taught by trained and certified instructors
- Evidence-based and proven effective
Self Management

- Programs focused on lifestyle behavior change principles
- Based on patient’s perceived problem
- Builds self-efficacy
- Holistic
- Pro-active
- Focused on improving health status and appropriate health care utilization
- Different from Traditional Patient Education
Evidence-Based Interventions
Promoted by NYS DOH and Supported by NYS QTAC
Interventions

- Stanford University Suite of Self-Management Programs
- Active Living Every Day
- Walk with Ease
- Active Choices
- CDC National Diabetes Prevention Program
Chronic Disease Self-Management Program (CDSMP)

**Target Population:** adults 18 and over living with one or more chronic conditions or providing care to someone living with a chronic condition

**About the Program:**
- lay led, interactive program
- offered in the US and internationally
- evidenced-based curriculum developed at Stanford University-Patient Education Research Center in the early 90’s

**Program Goal:** to help participants build confidence in their ability to manage their health condition(s).
CDSMP Program Structure

- Small group psycho-educational
- Groups meet 2½ hours weekly for 6 weeks
- Groups meet in traditional and non-traditional community settings
- Facilitated by 2 trained “peer leaders”
- Group Size Range: 12-20 participants
- Learn and practice problem-solving, goal-setting, decision-making, overcoming barriers; share progress with group, get feedback on challenges
- Available in English and Spanish
What Are the Benefits of CDSMP?

**Health Outcomes**
- Increased physical activity
- Better coping strategies and symptom management
- Improvements in self-rated health, social and role activities
- More energy and less fatigue

**Evidence Supporting Health Outcomes**
- Subjects that participated in CDSMP demonstrated significant improvements in energy, health status, social and role activities and self efficacy when compared to those that did not.
- Over 1,000 people with heart disease, lung disease, stroke, or arthritis participated in a randomized, controlled trial of CDSMP and were followed for up to three years.
- Researchers also found that CDSMP participants had fewer visits to the ER; there was also a trend toward fewer outpatient visits and hospitalizations.
CDSMP Suite of Programs

- Chronic Disease Self-Management
  - Any chronic health condition and multiple conditions
- Diabetes Self-Management
  - Type 2 Diabetes
- Positive Self-Management
  - HIV/AIDS
- Chronic Pain Self-Management
  - Chronic Pain
Diabetes Self-Management Program

- Stanford University developed program
- Utilizes about 50% of the content from the CDSMP with a Type 2 Diabetes focus
- Remaining content is specific to concerns of people living with Type 2 Diabetes
- Topics include:
  - Menu planning, nutrition label reading
  - Managing High/Low Blood Sugar
  - Managing Sick Days, Foot Care, Testing
  - Monitoring Blood Sugar
The Evidence Supporting the DSMP

- Originally developed in Spanish, the results showed:
  - Improved health status, including lower HbA1c levels (*Spanish version only*)
  - Improved health behavior
  - Increased self-efficacy
  - Fewer emergency room visits
CDSMP Plus for People Living with Hypertension

- Post CDSMP/DSMP module for people with hypertension
- Developed by Center for Excellence in Aging & Community Wellness with NYS DOH
- Hybrid health education and self-management to address health behaviors for people living with hypertension
Emerging Program: CDSMP+

- 122 persons attended one 2.5 hour hypertension session targeting diet, sodium, activity and blood pressure issues and 87 then attended the CDSMP weekly sessions

- Nearly 100% of respondents said hypertension module was very helpful; they received new ideas; would encourage others to take the session

- Significant improvement after 7 weeks in hypertension knowledge, number of healthy lifestyle activities (monitoring blood pressure at home, quitting smoking and following recommended eating plans)

- Trends for lower blood pressure over time
Active Living Every Day
Physical Activity: The Problem

- More than 50% of Americans don’t get enough physical activity
- 32% of adults are obese
- 50% of people who start an activity plan drop out within 6 months
- Repeated failures reduce self-confidence
Active Living Every Day

- Target audience: adults over 18 who want to increase their physical activity
- Small group in-person meeting
- 12 weeks, 1 hour per week
- Evidence-based program
- Uses behavior change models to empower people to overcome barriers to physical activity
- Not a traditional exercise program
Who Can Benefit from ALED?

- Anyone who is:
  - Sedentary (60% of Americans do not get enough physical activity; 25% are completely inactive)
  - At risk of coronary artery disease due to inactivity
  - In a “high risk” demographic group: women, African American and Hispanic adults, older adults, and less affluent people.
What is the Evidence?

- Tested under Random Control Trial conditions, and in a quasi-experimental “community based” design. (Wilcox, et al., 2008)
- Significant increases in:
  - Moderate to vigorous intensity physical activity
  - Total physical activity
  - Satisfaction with body appearance and function
- Decreases in BMI
- Decreases in depressive symptoms & perceived stress
More Evidence

- Report from OASIS Life Long Learning in June 2009
  - Participants averaged
    - a 33% increase in the number of days per week they did moderate activity
    - 47% increase in the number of minutes per day that they did activity
    - 95% increase in the number of minutes per week they did activity
  - Satisfaction with overall fitness, muscle strength in legs, endurance, muscle tone, energy levels increased by 243%! 
Active Living Every Day program philosophy

- Moderate physical activity = significant health benefits
- Lifestyle physical activity: an important alternative
- People are more likely to become and stay active when they learn lifestyle skills based on their readiness to change
Behavior change topics

- Identifying and overcoming barriers
- Enlisting social support
- Setting realistic goals
- Coping with lapses
- Rewarding yourself
- Positive self-talk
- Self-monitoring
Walk with Ease
Walk with Ease

- Target audience: adults over 18 with arthritis and or other lower extremity concerns and other chronic conditions, such as diabetes, heart disease and hypertension.
- Arthritis Foundation Walk With Ease program teaches strategies to make physical activity part of everyday life
- Self managed or 6 week group program
- Assessing starting point – Contract with self – walking diary – warm-up/stretch/cool down exercises – assess ending point
Evaluation Results

- Study data shows that the program:
  - Reduced pain and discomfort of arthritis
  - Increased balance, strength and walking pace
  - Built confidence in ability to be physically active
  - Improved overall health
Active Choices
What is Active Choices?

- Individualized, tailored physical activity counseling delivered by phone and mail.
- Six months of telephone coaching
- Coach guides participant to:
  - Create plan to fit lifestyle, preferences & resources
  - Develop self-management skills
    - Goal-setting, Problem solving, Build self-efficacy, Self-monitoring, Access to social support, Relapse Prevention
Active Choices

- Six-month physical activity program that helps individuals incorporate preferred physical activities in their daily lives.
- Program is individualized for each person.
- Staff or volunteers are trained to provide regular, brief telephone-based guidance and support, and mail follow-up is delivered to participants’ homes.
- More information: www.ceaw.org
Translational Research Outcomes

- 2503 participants averaged 65.8 years
- Successfully translated across a range of real-world settings
- Study samples were substantially larger, more ethnically and economically diverse, and more representative of older adult’s health conditions than in original efficacy studies
- Significant increases found:
  - moderate- to vigorous-intensity physical activity
  - total physical activity
  - satisfaction with body appearance and function
  - decreases in BMI

Implementation Study (Wilcox et al, 2008)
The National Diabetes Prevention Program
How is the National DPP Structured?

National Diabetes Prevention Program

COMPONENTS

- **Training: Increase Workforce**
  - Train the workforce that can implement the program cost effectively.

- **Recognition Program: Assure Quality**
  - Implement a recognition program that will:
    - Assure quality.
    - Lead to reimbursement.
    - Allow CDC to develop a program registry.

- **Intervention Sites: Deliver Program**
  - Develop intervention sites that will build infrastructure and provide the program.

- **Health Marketing: Support Program Uptake**
  - Increase referrals to and use of the prevention program.
Target Audience: Who Will Participate in the Lifestyle Change Program?

**Overweight Adults:**
- Limited to persons 18 years and older with a BMI of 24 or greater (Asian Americans: 22 or greater)

**AND ALSO HAVE**

**Pre-diabetes:**
- 50% of participants must have pre-diabetes **diagnosed** through blood test (FPG, OGTT, HbA1c) **OR** history of gestational diabetes.

- Other 50% eligible if screen positive for pre-diabetes based on **National Diabetes Prevention Program Risk Test**
CDC Risk Test

CDC Prediabetes Screening Test

Could you have Prediabetes?
Prediabetes means your blood glucose (sugar) is higher than normal, but not yet diabetes. Diabetes is a serious disease that can cause heart attack, stroke, blindness, kidney failure, or loss of feet or legs. Type 2 diabetes can be delayed or prevented in people with prediabetes through effective lifestyle programs. Take the first step. Find out your risk for prediabetes.

Take the Test—Know Your Score!
Answer these seven simple questions. For each “yes” answer, add the number of points listed. All “no” answers are 0 points.

- Are you a woman who has had a baby weighing more than 9 pounds at birth?
- Do you have a sister or brother with diabetes?
- Do you have a parent with diabetes?
- Find your height on the chart. Do you weigh as much as or more than the weight listed for your height?
- Are you younger than 65 years of age and get little or no exercise in a typical day?
- Are you between 45 and 64 years of age?
- Are you 65 years of age or older?

Add your score and check the back of this page to see what it means.

At-Risk Weight Chart

<table>
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<th>Height (in)</th>
<th>Weight (lb)</th>
<th>Height (in)</th>
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<td>5'7&quot;</td>
<td>173</td>
<td>6'4&quot;</td>
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- Baby > 9 lbs
- Sister/brother with diabetes
- Parent with diabetes
- At risk height/weight chart
- Under 65 and get little to no exercise
- Age
What Does the Lifestyle Change Program Look Like?

Lifestyle coach works with a group of participants to reduce their risk for type 2 diabetes by:

- Losing weight-5-7% of starting weight
  - Weekly weigh-ins
- Increasing physical activity-150 minutes per week
- Groups meet weekly for 16 core sessions (over 24 weeks), monthly post core sessions (minimum of 6)
- Strategies include: Group dynamics, facilitation vs. teaching, self-monitoring of food, activity and weight
NDPP (continued):

- Facilitated by trained Lifestyle Coach who works with groups of participants to reduce their risk by:
  - Losing weight through healthy eating (5-7% of starting weight)
  - Physical activity (avg. 150 minutes per week)
  - Learning to identify and address barriers to healthy eating and physical activity

- Relies on self-monitoring, goal setting, group process
- Group size: 8 to 18 participants
What Participant Data is Reported to CDC through QTAC?

- **Participant’s pre-diabetes determination:** (FPG, 2-hour OGTT, A1C, GDM, and/or CDC Prediabetes Screening Test)
  - Note: these will be Y/N fields – specific values are not reported

- **Demographics:** age, ethnicity, race, sex

- **Physical characteristics:** height, weight (height and starting weight used to determine BMI)

- **Session data:**
  - Attendance-session type (core, post-core, makeup)
  - Weight
  - Minutes of physical activity
<table>
<thead>
<tr>
<th>Time</th>
<th>Activities</th>
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</thead>
<tbody>
<tr>
<td>Apply</td>
<td>• Apply for recognition (agree to curriculum, duration, intensity)</td>
</tr>
<tr>
<td>2 wks</td>
<td>• Granted “pending recognition” by CDC</td>
</tr>
<tr>
<td>6 mos</td>
<td>• Organization begins lifestyle change program</td>
</tr>
<tr>
<td>24 mos</td>
<td>• Organization submits evaluation data (every 6 months)</td>
</tr>
<tr>
<td></td>
<td>• Recognition status assessed (granted full or remain pending)</td>
</tr>
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The Diabetes Prevention Program (DPP) Research Study

**Goal**: to learn whether losing modest amounts of weight through improving diet and increasing physical activity, or taking the diabetes drug metformin, could prevent or delay type 2 diabetes in people at high risk for developing the disease

- **Major multicenter clinical research study***
  - 3,234 participants
  - 27 clinical centers in U.S.
  - Funded primarily by NIH

*NEJM, Vol. 346, No. 6, 2002
What Were the DPP Study Findings?

- Lifestyle intervention sharply reduced the chances of developing type 2 diabetes 58%; for participants age 60+ it was 71%.
- Metformin group also reduced their risk but not as much as the lifestyle intervention group (31%).

New England Journal of Medicine, 2002
What Did the Diabetes Prevention Program (DPP) Research Study Show?

- **Weight loss** was the most important factor in lowering the risk for type 2 diabetes.

- The effect of weight loss on the risk for type 2 diabetes was the same across the board – regardless of sex, socioeconomic status, race, or ethnicity.

- Millions of people with diabetes in the U.S. can **prevent or delay type 2 diabetes** through modest weight loss as part of a structured lifestyle program.
The DPP was resource intensive:

- The lifestyle intervention contained sixteen “core” one-to-one sessions delivered by specialist case managers who were trained nutritionists, exercise physiologists, or behavioral psychologists.
- These sessions were followed by twice-monthly in-person “maintenance” sessions with telephone contact between sessions.
Results of Translational Research so far...

- Similar levels of weight-loss were achieved
  - Delivered in community-based sites
  - Delivered in small groups
  - Delivered by a trained Lifestyle Coach
  - Eliminated participant incentives

For more information on published translational research:

- Deploy Research Study
- Special Diabetes Program for American Indians Diabetes Prevention Demonstration Project
- Montana Diabetes Prevention Program
- I CAN Prevent Diabetes Sites in Minnesota
- YMCA-led classes with DPCA
It’s the latest thing. It’s called the veterinarian diet.