# Expanding Successful Telephonic Diabetes Self- Management Education (DSME) Program to Persons with Co-Occurring Cardiovascular Disease

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## Learning Objectives

- Recognize how telephonic modality increases access to education and support for self-managing Diabetes and Cardiovascular Disease
- Identify elements of partnerships with employers that support improved health and optimum health care use
- Compare barriers to successful individual health action plans

## Background

### Diabetes 2004-2005

**Maine**[1]

**Prevalence:**
- 6.2% of U.S. population
- 8.3% of Maine adults

**Economic Burden:**
- $518 million in 1997

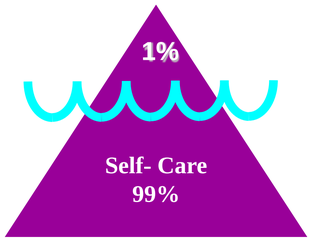
**Health Burden:**
- 7th leading cause of death
- Blindness
- Kidney Disease
- Amputation
- Cardiovascular Disease
- Dental Disease
- Complications of Pregnancy

**State of Maine Employees**[2]

**Prevalence:**
- 5.9 % of State Employees

**Economic Burden:**
(members with diabetes)
- 16% of total employee health costs
- hospitalization rate 4-x's other dx.

**Health Burden:**
- 52% had at least one co-morbid condition, most being CVD.




- **Medical Care for Chronic Disease is only 1% of treatment**[3].
- **Diabetes Self – Management Education (DSME) known to be effective for supporting self - care but:**

- **US**[4] Only 40% ever attend
- **Maine**[5] 3% participate/year
- **Maine**[5] 1:4 newly diagnosed attend

**Barriers to DSME in Maine**[5]
- Aversion to group classes
- Don't feel they need the information
- Inconvenient time/day
- Transportation difficulties
- Don't know enough about the program

## References

1. Maine CDC Diabetes Prevention Program http://www.maine.gov/dhhs/mecdc/population-health/dcp/index.htm accessed August 2004.
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## The Partnerships

**PARTNERS: 2004 to Present**
- Medical Care Development, Inc.
- State of Maine Div. of Employee Health & Benefits
- Aetna Health Insurance
- Maine Municipal Employees Health Trust
- Anthem Blue Cross/Blue Shield of Maine
- 25 DSME Maine Programs

**Shared Goals:**
- *Increased access to and utilization of DSME known to improve the health and health care of participants*
- *Help overcome barriers using the telephone-based intervention to help engage increased numbers of clients in their own health improvement*
- *Enhanced education & support to help persons cope with the complex tasks of managing multiple diagnoses*

**Key Elements**

- **MCDPH/TDES©:** Locally provided, centrally managed services; Data collection, analysis, and outcome reporting; Advanced training for diabetes educators
- **Employer:** Waived pharmacy co-pays for diabetes supplies/meds & CVD Meds; Contacts on work time
- **Insurer:** Outreach mailing and direct reimbursement model
- **Educators:** ADEF[6] curriculum, evidenced - based interventions, individualized services; Familiar with local needs, resources, culture
- **Advisory Comm**. TDES© "grads", diabetes educators, Nurs. & Pharm. Academia, MCD Brd. Member

## Programs

### Telephonic Diabetes Education & Support© (TDES©)
- Year long program offers DSME to persons with type 1, type 2, or prediabetes
- Monthly telephone calls following first in-person enrollment visit
- Provided by experienced and certified diabetes educators

### TDES©/+Cardiovascular Disease (TDES©/+CVD)
- For persons with diabetes with high blood pressure and/or high cholesterol
- Support self-management of multiple conditions
- Development supported by Federal HRSA Rural Outreach Grant

### TDES© *to the Second Power! (TDES²!)*
- TDES© "grads" shift from Education to Empowerment
- 4-6 contacts/year promote independent self-care
- Focus on individual goals and successful action plans

## Quantitative and Qualitative Evaluation

- **Base line from Primary Health Care Provider**
- **Update by Self-report at Pre- and Post- Assessment and Monthly Contact**

- ❑ Program Participation, Program Completion, Level of Engagement
- ❑ Demographics including past diabetes education
- ❑ Self-care Knowledge[6] and Stanford Diabetes Self- Efficacy[7]
- ❑ ADA Standards of Medical Care[8]/HEDIS Measures
- ❑ Days Hospitalized, Emergency Care Visits, MD "Sick" Visits, Work Days lost
- ❑ At Goal, & Progress towards, ADA Clinical Goals[8] for: $HbA1_C$, Total Cholesterol, HDL – C, LDL - C, Triglycerides, Blood Pressure, BMI, Percent Weight Lost or Gained
- ❑ Number of Barriers to meeting Individual Health Goals[9]

## The Impact

**State of Maine Success**
- **Increased health care and improved health with reduced costs!**
- **2008 ROI - average COST SAVINGS $**1300/participant/year with statistically significant improved adherence to oral diabetes medication
- **2009 ROI -** significantly HIGHER Medication Adherence & Use of Preventative Care associated with higher quality of care

| TDES© Outcomes | Pilot 2005-2006 | Yr 1 Statewide 2007-2008 | Yr 2 Statewide 2008-2009 |
|---|---|---|---|
| Total Enrollment | 149/16.6% | 204/18% | 131/9% |
| Completion Rate | 60.4% | 82% | 87.1% |
| Ave Age/Males | 56/42% | 56/48.8% | 56/43% |
| No Prior Diabetes Ed | - | 37.4% | 50% |
| Clinical Goals | A1c, B/P, Total Chol, and LDL improved | | |
| HEDIS Measures | Overall maintained or Improved | | |
| Satisfaction Surveys | 25 - 52% return rate- highly satisfied "Signed up for the savings, stayed for the support" | | |

- Enhanced support for diabetes with cardiovascular risk factors - **TDES©/+CVD**
- **Continued success** with statically significant improvement in HbA1c & BMI.

| TDES©/+CVD Key Outcomes | January 2010 to June 2011 |
|---|---|
| Total Enrollment | 12% of first mailing |
| Completion Rate | 90% |
| Demographics | Equal male/female, ave. age 55, actively employed |
| Diabetes History | 50% had DM <5 yrs, up to 42 yrs! 3% had no previous education |
| Clinical Goals | A1c*, B/P, Total Chol, LDL, & BMI* improved |
| HEDIS Measures | Overall Maintained or Improved |
| Satisfaction Surveys | 44% return rate- Highly satisfied with lengthy notes of appreciation & praise for educator. |

- Also studied barriers to meeting individual health goals[9]
- Improvement across all categories of barriers. Number of persons reporting barriers and the number of barriers/person decreased at Post- assessment
- Need to address the issues that remained high - Cost/Insurance, Multiple Diagnosis/Treatments and Grief/Depression/Distress

| BARRIERS TO MEETING HEALTH GOALS | | | |
|---|---|---|---|
| Reported Barrier | Pre-Assessment | Post-Assessment | DECREASED? |
| SELF-CARE | | | |
| No symptoms...Does not feel sick | 16 | 8 | Y |
| Denying Illness is Lifelong | 12 | 4 | Y |
| Lack of Understanding | 7 | 2 | Y |
| Fear of Needles | 6 | 3 | Y |
| ACCESS CATEGORY | | | |
| Cost/Insurance | 21 | 15 | Y |
| Transportation | 3 | 2 | Y |
| Low reading/math skills | 2 | 1 | Y |
| CLINICAL CATEGORY | | | |
| Multiple Diagnosis/treatments | 29 | 18 | Y |
| Grief/Depression/Distress | 28 | 17 | Y |
| Impaired vision/hearing/dexterity/touch | 7 | 3 | Y |
| OVERALL TOTAL | 131 | 73 | Y |

*"I wish that people would just try the program it works. I have got off my diabetic meds & blood pressure meds, and now eat better and go swimming, and to the gym. For the first time in 6 years I got into my first pair of jeans, and o.m.g. does that feel good! I know I have a long way to go, but I have come a long way, when I started this program I was 400 pounds I am now 323 pounds and 2 to 3 dress sizes smaller. I would like too say thank you so much! "*

TDES Graduate

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