Rolling Out the National Diabetes Prevention Program

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The findings and conclusions in this presentation are those of the author and do not necessarily represent the views of the CDC.
26 million with Diabetes

79 million with Prediabetes
1 in 3 U.S. Adults Will Have Diabetes in 2050 ...

- If current trends continue
  - Americans are living longer
  - People with diabetes also are living longer
  - Increases in minority groups at high risk for type 2 diabetes
  - New cases of diabetes

1 in 10 U.S. adults have diabetes now

Boyle, Thompson, Gregg, Barker, Williamson. Population Health Metrics 2010: 8:29 (22 October 2010)
BASIC SCIENCE

EFFICACY

EFFICACY

EFFICACY

EFFICACY

EFFECTIVENESS

EFFICIENCY

AVAILABILITY

DISTRIBUTION

Molecular/physiological

Real world settings

Ideal settings

Biggest effect on most people

Supply

Diffusion of interventions

DPP Research Study

- Can type 2 diabetes be prevented/delayed through a lifestyle intervention or metformin in people with impaired glucose tolerance?

- Lifestyle goal 7% weight loss and 150 min PA/wk

- Lifestyle group reduced risk of type 2 diabetes by 58% (71% in those over age 60) and this was true for all participating ethnic groups and for both men and women

- Metformin reduced diabetes risk by 31%

- 10-year f/u incidence of diabetes was reduced by 34% in lifestyle group and 18% in those taking metformin
Further Benefits of Lifestyle Intervention: *Other CVD risk factors are also improved*

- ↑ BP was present in 30% of subjects at entry - then ↑ in placebo and metformin groups, significantly ↓ with lifestyle

- TG levels ↓ in all treatment groups, but ↓ significantly more with lifestyle intervention

- Lifestyle intervention significantly ↑ HDL level and ↓ LDL

- At 3 yr F/U the use of meds in the lifestyle group was 27–28% ↓ for hypertension and 25% ↓ for hyperlipidemia compared with placebo and metformin groups

DPP. Diabetes Care 28:888–894, 2005
Summary of Benefits of DPP Lifestyle Program

- Treating 100 high risk adults (age 50) for 3 years...
  - Prevents 15 new cases of type 2 diabetes
  - Prevents 162 missed work days
  - Avoids the need for BP/Chol pills in 11 people
  - Adds the equivalent of 20 perfect years of health
  - Avoids $91,400 in healthcare costs

2 DPP Research Group. Diabetes Care. 2003 Sep;26(9):2693-4

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Cost of DPP 1-1 Format

- First 12 months cost = $1,400 per participant
- Total 3 year cost = $2,780 per participant
- With inflation, three year costs of this program in 2010 exceed $3,500 per participant
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EFFICIENCY

Efficiency

Most people

EFFECTIVENESS

Effectiveness

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Diffusion of interventions

DISTRIBUTION

AVAILABILITY

Availability

Supply

Diffusion of interventions

DISTRIBUTION
Real-World Studies

- Analysis of 28 studies applying the findings of the DPP research study in real-world settings
- Average weight change was 4%
- Weight change was similar whether program was delivered by clinically trained professionals or lay educators
- Every additional lifestyle session attended, weight loss increased by 0.26 percentage point

Cost of Group-Based Format

- $275 - $325 per participant when using trained staff (Ackermann, et al)
- $550 per participant when using CDEs (Amundsen, et al)
- About $500 per person when implementing to scale since it includes engaging participants, enrollment, managing eligibility, etc.
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EFFICIENCY

EFFECTIVENESS

EFFICACY

DISTRIBUTION
Principles Considered in Developing the National Diabetes Prevention Program

- Diabetes risk must match program cost
- Program must be effective
- Program must be economically sustainable
- Program must be available
- Link health care and community sectors
National Diabetes Prevention Program

- Systematically scale the translated model of the DPP for high risk persons in collaboration with community-based organizations that have necessary infrastructure, health payers, health care professionals, public health and others to reduce the incidence of type 2 diabetes in the U.S.

- In 2010 Congress authorized CDC to lead the National DPP
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.

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Helpful Websites

- www.cdc.gov/diabetes
- www.cdc.gov/diabetes/prevention
- www.cdc.gov/diabetes/prevention/recognition
- www.dttac@emory.edu