Cardiometabolic Disorder and Diabetes Management in the U.S.

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Reducing Incidence and Complications of Diabetes: The Role of Evidence-based Interventions

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Our Public Health Challenge...

30 million Americans have diabetes

84 million Americans have prediabetes

9 out of 10 adults with prediabetes don’t know they have it
Estimated age-adjusted prevalence of diagnosed diabetes by race/ethnicity and sex among adults aged >18 years, United States, 2013-2015

Trends in Age-standardized Rates of Diabetes-Related Complications from 1990 to 2010 among U.S. Adults with Diagnosed Diabetes

- Myocardial Infarction
- Stroke
- Amputation
- ESRD
- Hyperglycemic Death

Events 10,000 Adult Population with Diagnosed Diabetes

CDC’s Response: 2017-2021 Strategic Plan

Goal 1. Prevent type 2 diabetes

Goal 2. Prevent complications, disabilities, and consequences related to diabetes through improved approaches to care

Goal 3. Reduce differences in health that impact people affected by diabetes
Goal I: Prevent Type 2 Diabetes

**Surveillance and Research**
Conduct surveillance, epidemiology, and effectiveness research regarding type 2 diabetes prevention, and disseminate findings to stakeholders.

**Prediabetes and Associated Risk Factors Awareness**
Build awareness of prediabetes, its risk factors, and behaviors that contribute to type 2 diabetes – including their impact on public health.

**Applied Research and Translation**
Conduct applied public health research and execute a translation agenda for type 2 diabetes prevention, and disseminate findings to stakeholders.

**National Diabetes Prevention Program**
Increase preventive behaviors for type 2 diabetes by scaling and sustaining the National Diabetes Prevention Program (National DPP).
Overview of the National DPP

In the Diabetes Prevention Act of 2009, Congress authorized CDC to establish the National DPP.

The core of the National DPP is a CDC-recognized, year-long lifestyle change program that offers participants:

1. A trained lifestyle coach
2. CDC-approved curriculum
3. Group support over the course of a year

To successfully implement the program, the National DPP relies upon a variety of public-private partnerships including community organizations, private insurers, employers, health care organizations, faith-based organizations, and government agencies. Together, these organizations work to:

- Build a workforce that can implement the lifestyle change program effectively
- Ensure quality and standardized reporting
- Deliver the lifestyle change program through organizations nationwide
- Increase referrals to and participation in the lifestyle change program

Increase Program Coverage & Reimbursement

Many public and private insurers are offering the National DPP as a covered benefit.

Commercial Insurers & Employers

Many commercial health plans and private sector employers provide some coverage for the National DPP. Examples include:

- AmeriHealth Caritas
- Anthem
- BCBS Florida
- BS California
- BCBS Louisiana
- Denver Health Managed Care: Medicaid, Medicare, Public Employees
- Emblem Health: NY
- GEHA
- Costco
- Humana
- Kaiser: CO & GA
- LA Care: Medicaid
- MVP’s Medicare Advantage
- Priority Health: MI
- United Health Care: National, State, Local, Private, and Public Employees
- LL Bean

Public-Sector Coverage

State/Public Employees: Over 3 million public employees/dependents in 12 states have the National DPP as a covered benefit.

Medicaid: Four states have approved coverage for Medicaid beneficiaries: Montana, Minnesota, New Jersey (2018), and California (2018)

Medicare: Medicare DPP coverage starts on April 1, 2018

Goal II: Prevent Complications, Disabilities, and Consequences Related To Diabetes Through Improved Approaches to Care

**Surveillance and Research**
Conduct surveillance, epidemiology, and effectiveness research regarding diabetes care, and disseminate findings to stakeholders

**Program Implementation**
Support the expansion & implementation of Diabetes Self-Care Management Education & Support (DSMES) and other strategies for preventing complications, disabilities, & burden associated with diabetes

**Applied Research and Translation**
Conduct public health applied research and execute a translation agenda for diabetes care
Diabetes Self-Management Education and Support (DSMES)

- **Overview**: An evidence-based intervention program that teaches medication management, nutrition, and physical activity skills to people with diabetes to optimize their ability to self-manage the disease.
- **Accreditors**: American Diabetes Association (ADA) and American Association of Diabetes Educators (AADE)
- **Locations**: 4,568 program sites across the U.S with approximately 90,000 new participants annually
- **Referral**: The treating physician or qualified non-physician provider must provide a written referral indicating a diagnosis of diabetes
- **Duration**: Up to 10 hours of diabetes-related training within a consecutive 12-month period and 2 hours of follow-up annually.
- **Reimbursement**: Medicare, Medicaid and most health plans cover diabetes education. 46 states plus District of Columbia have state insurance laws that mandate coverage of DSME by private payers.

**Participant Benefits**
- Lower health care costs and hospitalizations
- Achieve better metabolic control
- Improve lipid levels
- Reduce blood pressure
- Improve quality of life: less blurred vision, frequent urination, fatigue

**Program Challenges**
- Lack of program awareness
- Program accessibility; transportation issues; timing
- Program length and time commitment
- Concerns about patient costs

**Only 6.8% of newly diagnosed type 2 diabetes patients with private insurance**
**Only 5% of Medicare recipients participated in DSMES programs**

Sources: 1) ADATE: Diabetes Education Program, 2) Joint Statement: ADA and AADE on DSME, 3) National Conference of State Legislators, 4) DSMSE Participation, 5) DMSE Providers
Goal III: Reduce Differences in Health that Impact People Affected by Diabetes

Disparities-Focused Surveillance
Conduct surveillance, epidemiology, and effectiveness research regarding progress made in reducing diabetes-related disparities among different groups

Targeted Program Implementation
Establish and implement an approach for making strategic, scientifically sound investments to rapidly scale-up core diabetes prevention and management programs and interventions in focused areas of urgent need
Why we do it.
Thank You!

For more information please contact Centers for Disease Control and Prevention

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Visit: www.cdc.gov | Contact CDC at: 1-800-CDC-INFO or www.cdc.gov/info

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.
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What’s Working / What’s Not Working In the Detection and Management of Cardiometabolic Diseases and Diabetes

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Past Member of the Board of Directors, American Diabetes Association
Member of the Governing Council, Minority Affairs Section, AMA
Practicing Physician in Primary Care
Community Assessment for Diabetes
- ADA Projection for Diabetes in American population: 1:3
- ADA Projection for Diabetes in Black American population: 1:3
- ADA Projection for Diabetes in Hispanics: 1:2!!!!!!!

Community Assessment for Heart Disease
- Every year about 735,000 Americans will have a heart attack
- 1:4 deaths in the United States are due to heart disease
- Every 40 seconds someone has a heart attack

Combination of Both (disastrous explosion!)
- Adults with diabetes are 2-4 times more likely to die from heart disease
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- Cardiometabolic Syndrome
  - Diabetes: Insulin Resistance
  - Hypertension
  - Hyperlipidemia (elevated LDL, low HDL, Triglycerides)
  - Obesity (visceral/abdominal/central)
  - Sedentary Lifestyle (physical inactivity)
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Community Risk Factors

- Poor diet (high salt intake)
- Physical inactivity
- Excessive alcohol use
- Smoking
- Lower socioeconomic level
- Lower educational level
- Lower financial status
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- What’s not working?
  - **Age**: as we mature, our risk increases!
  - **Genetics** is still not being altered!
  - **Cultural bias** (provider and patient)
  - We are not addressing **Prediabetes** appropriately
  - **Access** to quality healthcare is not always available
  - **Cost** of “good medicine” is out of control!
  - Radical **lifestyle changes**!
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What is working?

- Increasing *cultural competence* training
- Increasing linguistically-appropriate *communication*
- *Affordable* healthcare insurance
- Cessation of *smoking*
- *Education, education, education!*
The Future

- Prevention!!!!!
- DASH diet (Dietary Approaches to Stop Hypertension)
- Culturally-sensitive lifestyle modification is needed!
- “Population health” groups
- Community education: fresh fruits and vegetables
- Better access to healthcare services
- Address and overcome stereotypes about minority groups