A COMMUNITY-CLINICAL LINKAGE APPROACH TO
IMPROVING DIABETES MANAGEMENT
AND PREVENTING TYPE 2 DIABETES:
STATE AND LOCAL PUBLIC HEALTH EFFORTS

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National Association of Chronic Disease Directors
National Association of Chronic Disease Directors

- National public health association representing chronic disease leaders in all 50 states, DC and the US territories
- Provides a national forum for chronic disease prevention and control practitioners
- Founded in 1988
- Headquartered in Atlanta, GA
- 6,000+ members
Main Points

Context
• Overview Community-Clinical Linkages and Why?
• Health Care Market Signals
• Overview of Diabetes and the Data

State and Local Public Health Efforts in Diabetes
• Promoting evidence-based strategies and Policies
• Progress
• Partnerships
Overview of Community-Clinical Linkages and Why?
Framework for Integrated Clinical and Community Systems of Care

- Care Delivery
  - Information Systems
  - Decision Support
  - Delivery System Design
  - Self Management Support
  - Local patient environment
  - Clinicians

- Community Systems
  - Resources
  - Services
  - Supportive Environment
  - Social norms

- Family & Individual Empowerment and Engagement

- Integration
  - Convener, Advocacy, Data Exchange, Financing, Governance/Regulation, Referral Processes, Communications

- Metrics

- Population Health

Health Care Market Signals
Health Care Costs

- U.S. health care spending grew 5.8 percent in 2015, reaching $3.2 trillion or $9,990 per person.
- As a share of the nation's Gross Domestic Product (GDP), health spending accounted for 17.8 percent.
- This was almost 50 percent more than the next-highest spender (France, 11.6% of GDP) and almost double what was spent in the U.K. (8.8%).

Economic Cost of Diabetes in US, 2012

Total economic costs, $245 b.

Direct medical cost, $176 b.
- Institutional care, $91 b
- Outpatient care, $32 b
- Medications and supplies, $53 b

Indirect cost, $69 b.
- Lost workdays, $5 b
- Product loss, $24 b
- Disability, $22 b
- Mortality, $18 b
Policy Foundation for Movement to Value Based Payment Models

MACRA
- Million Hearts: CVD Risk Reduction Model
- Comp. ESRD Care

Medicare Part B Drug Payment Model
- CPC+
- MA Value-Based Insurance Design Model
- Part D Enhanced MTM Model

Cardiac Rehab Incentive Payment Model
- Next Generation ACO
- Home Health VBP Model

CJR
- Oncology Care Model
- Medicare Care Choices Model
- Next Generation ACO

MSSP
- Pioneer ACO Model
- CPC
- BPCI

What’s next?
- Voluntary
- Mandatory

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Overview of Diabetes and the Data
What is Diabetes?

**Type 1** – body produces little to no insulin ~ 5% of cases

**Type 2** – body doesn’t use insulin effectively ~ 90-95% of cases

**Prediabetes** – high risk for developing type 2 and for heart disease and stroke

**Gestational Diabetes** – higher risk for developing GDM in future pregnancies and for developing type 2

### Diagnostic Criteria

<table>
<thead>
<tr>
<th>Diagnostic test</th>
<th>Normal</th>
<th>Prediabetes</th>
<th>Diabetes*</th>
</tr>
</thead>
<tbody>
<tr>
<td>HbA1C(%)</td>
<td>&lt;5.7</td>
<td>5.7-6.4</td>
<td>≥6.5</td>
</tr>
<tr>
<td>Fasting plasma glucose (mg/dL)</td>
<td>&lt;100</td>
<td>100-125</td>
<td>≥126</td>
</tr>
<tr>
<td>Oral glucose tolerance test (mg/dL)</td>
<td>&lt;140</td>
<td>140-199</td>
<td>≥200</td>
</tr>
</tbody>
</table>

*Increased risk for heart disease, and stroke, blindness, amputations, and kidney disease.

Type 2 Diabetes Risk Continuum
29 million Americans adults have diabetes

86 million American adults have prediabetes

9 out of 10 adults with prediabetes don’t know they have it

Current Projections of Cases of Diabetes in the United States by 2030

The graph shows the projected increase in cases of diabetes from 2007 to 2030, measured in millions. The number of cases is projected to steadily increase from 2007 to 2030.


![Graph showing trends in incidence and prevalence of diabetes from 1980 to 2014.](image-url)
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 per 10,000 Adult Population with Diagnosed Diabetes

Year:
- 1990
- 1995
- 2000
- 2005
- 2010
Promoting Evidence-based Strategies and Policies for Diabetes Prevention and Diabetes Management
Type 2 Diabetes Risk Continuum

- Evidence-based strategy for diabetes prevention:
  - CDC-recognized Diabetes Prevention Programs (DPP)

- Evidence-based strategy for diabetes management in addition to clinical care:
  - AADE-accredited or ADA-recognized Diabetes Self-Management Education (DSME)
What is Diabetes Self Management Education (DMSE) and Benefits?

• **DSME** is the ongoing process of facilitating the knowledge, skill, and ability necessary for diabetes self-care. This process incorporates the needs, goals, and life experiences of the person with diabetes and is guided by evidence-based standards.¹

• **DSME Benefits**
  • 1% reduction in A1C levels has been found to be associated with risk reductions
    • 21% decrease in diabetes-related deaths
    • 14% decrease in heart attacks
    • 37% decrease in microvascular complications
      • Eyes ~ Kidney ~ Nerves

• **Cost of DSME**
  • Average Medicare cost for DSME is $521 for 10 hours

Diabetes Self Management Education (DMSE) cost effectiveness

<table>
<thead>
<tr>
<th>Average Cost Savings Per Person with Diabetes Per Year</th>
<th>Commercial</th>
<th>Medicare</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005 – 2007</td>
<td>$1,455</td>
<td>$422</td>
</tr>
<tr>
<td>2005 – 2008</td>
<td>$481</td>
<td>$976</td>
</tr>
</tbody>
</table>

✓ Primary reason for cost savings was decreased inpatient costs

### Risk Stratification for Type 2 Diabetes Prevention Interventions

<table>
<thead>
<tr>
<th>Risk Level</th>
<th>Adult Prevalence (%)</th>
<th>10 Years Diabetes Risk (%)</th>
<th>Risk Indicators</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>~15%</td>
<td>&gt;30</td>
<td>A1c &gt;5.7%</td>
<td>Structured Lifestyle Intervention in Community Setting</td>
</tr>
<tr>
<td>High</td>
<td>20%</td>
<td>20 to 30</td>
<td>FPG &gt; 100</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>30%</td>
<td>10 to 20</td>
<td>2+ risk factors</td>
<td>Risk Counseling</td>
</tr>
<tr>
<td>Low</td>
<td>35%</td>
<td>0 to 10</td>
<td>0-1 risk factors</td>
<td>Build Healthy Communities</td>
</tr>
</tbody>
</table>

Source: Gerstein et al., 2007; Zhang et al., 2010
Evidence for Preventing Type 2 Diabetes

DPP Research Study: Can type 2 diabetes be prevented/delayed through a lifestyle intervention or metformin in people with impaired glucose tolerance (prediabetes)?

- Lifestyle goal 5-7% weight loss and 150 min PA/wk
- Lifestyle group reduced risk of type 2 diabetes by 58% (71% in those over age 60), true for all participating ethnic groups and for both men and women. Metformin reduced diabetes risk by 31%
- 10-year follow-up: incidence reduced by 34% in lifestyle group and 18% in those taking metformin
- 15-year follow-up: incidence reduced by 27% in the lifestyle intervention group and 18% in the metformin group compared to the placebo group.

- Average cost of DPP: ~$500
CDC Funding
State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health

All 50 states and DC receive CDC funding (1305) to address these chronic diseases/risk areas

= 17 states and 4 large cities receive additional funding (1422) for enhanced activities for state and local efforts to serve vulnerable populations

4 large cities are: Los Angeles, San Diego, Philadelphia, New York City
State and Local Public Health Chronic Disease Prevention and Control Efforts – 4 Domains

• **Epidemiology, surveillance, and evaluation** to inform, prioritize, and monitor diseases and risk factors and the delivery of interventions.

• **Environmental strategies** that reinforce healthful behaviors and expand access to healthy choices.

• **Health systems interventions** to improve the delivery and use of clinical and other preventive services.

• **Clinical and community linkages** to better support chronic disease self-management.
Community-Clinical Linkages for People with Diabetes

All 50 states are working to increase use of DSME by increasing referrals to, coverage for, and availability of DSME programs and reducing barriers such as access, costs, and transportation.

Progress to Date (Y3):

- Over 3,000 DSME programs were offered across in over 50% of counties in 43 states
- Over 1.5 million Medicaid recipients now have DSME as a covered benefit
- Over 1 million people with diabetes participated in an ADA-recognized or AADE-accredited DMSE program

Disclaimer: The progress to date figures do not reflect final data from the CDC and are rounded estimates based on preliminary data shared with CDC’s grantees.
Community-Clinical Linkages for People with Prediabetes

All 50 states are working to increase use of DPP by increasing awareness of prediabetes, increasing referrals to CDC-recognized diabetes prevention programs, and securing the program as a covered benefit for state/public employees and Medicaid beneficiaries.

Progress to Date (Y3):

- Over 30% of health care systems have policies to refer persons at high risk for type 2 diabetes to a CDC-recognized diabetes prevention program
- Over 850,000 Medicaid beneficiaries at high risk for type 2 diabetes now have access to a CDC-recognized diabetes prevention program as a covered benefit
- Over 3 million state employees in 11 states now have access to a CDC-recognized diabetes prevention program as a covered benefit
- Over 30,000 people with prediabetes or at high risk for diabetes enrolled in a CDC-recognized diabetes prevention program and over 60% were referred by a health care provider

Disclaimer: The progress to date figures do not reflect final data from the CDC and are rounded estimates based on preliminary data shared with CDC’s grantees.
Community-Clinical Linkages for People with Prediabetes

17 states, 4 large cities and 85 local subawardees are working to increase prediabetes screening, testing and referral; enrolling vulnerable, at-risk participants in CDC-recognized diabetes prevention programs, and securing the program as a covered benefit for employees.

Progress to Date (Y2):

– Over **100** health care systems engage CHWs to link patients to a CDC-recognized diabetes prevention program
– Over **100** health care systems have policies to refer persons at high risk for type 2 diabetes to a CDC-recognized diabetes prevention program
– Over **2 million** people were reached through evidence-based engagement strategies and exposed to message about the National Diabetes Prevention Program
– Over **17,000** people with prediabetes or at high risk for diabetes enrolled in a CDC-recognized diabetes prevention program

Disclaimer: The progress to date figures do not reflect final data from the CDC and are rounded estimates based on preliminary data shared with CDC’s grantees.
Partnerships: The Key to Progress

Change moves at the speed of trust. Trust moves at the speed of relationships. ------- Gary Gunderson, Wake Forest Baptist Med Center
Diabetes Action Plan

Legislation
Diabetes Action Plan Legislation (aka DAP Legislation)

• What it is—
  • Casts a bi-annual spotlight on the cost and burden of diabetes
    • Medicaid population
    • General population
    • Agency responsible for state employee health benefits
  • DAP report includes 5 parts
    • Data illustrating the costs and impact of diabetes
    • Benefits of current programs to address diabetes
    • Current/collaborative efforts to address diabetes
    • Evidence-based recommendations for legislative action to reduce impact of prediabetes, diabetes and diabetes-related complications
    • Estimated budget for recommendations
  • Additional possibilities
    • Inclusion of other special populations
    • Inclusion of specific data indicators
    • Specific/detailed recommendations to policy makers
Diabetes Action Plan Legislation: State Activity

Passed/Implementation

- Arkansas*
- Florida*
- Illinois*
- Kentucky (2 reports)
- Louisiana
- Mississippi
- Missouri
- New Jersey*
- North Carolina
- North Dakota
- Oklahoma*
- Oregon
- Tennessee*
- Texas
- Washington (budget bill)
- Wyoming

Both report drafted

**BOLD:** Passed in 2015

2014/2015 Legislative Activity

- Alabama (HB415)
- California (AB 1592, SB 1316)
- Indiana (SB 209)
- Kansas (HB 2032)
- Georgia (Exec order)
- Michigan (Exec Order)
- Pennsylvania (Resolution)
- Connecticut (part of a Chronic Care bill)
Thank You

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