Prediabetes Prevalence and Diabetes Screening in Alabama, 2013

Presented by: Crystal Franklin, MPH
Epidemiologist

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Slides Prepared by: Emily Piercefield, MD, MPH
CDCAssignee to the Alabama Department of Public Health
Outline

- Background
- Prediabetes in Alabama
  - Prevalence
  - Risk factors
- Reducing risk of progression to diabetes
- Diabetes screening in Alabama
  - Prevalence
  - Barriers to screening
Background

- **29 million Americans have diabetes**
  - 12.3% of U.S. adult population
  - One in 4 remain undiagnosed

- **86 million U.S. adults have prediabetes**
  - 37% of U.S. adults
  - Only 11% are aware of having prediabetes

Consequences

- Diabetes: 7th leading cause of death
- Causes heart disease, stroke, blindness, kidney failure, and lower leg amputations
- Early detection and treatment of prediabetes:
  - Prevents or delays progression to diabetes
  - Reduces health complications

Question

- What is the prevalence of prediabetes in Alabama?
- What are the characteristics related to having prediabetes?
Data Source

- **Behavioral Risk Factor Surveillance Survey (BRFSS)**
  - Nationwide annual telephone survey
  - Collects self-reported health and health risk data
  - >100,000 U.S. participants
    - >6,000 in Alabama
  - Provides state-level estimates of disease conditions and health behaviors

* Sponsored by Centers for Disease Control and Prevention, other federal agencies and participating states
Results

- An estimated **255,000** Alabama adults report having prediabetes
  - 8.5% of adult population
- But most people with prediabetes don’t know it to report it
- Best case: apply US national rate (37%)
  - At least **1.3 million** Alabama adults actually have prediabetes
- Worst case: if only 11% of people with prediabetes are aware of having it, then
  - As many as **2.3 million** Alabama adults actually have prediabetes
## Characteristics of Persons Self-reporting Prediabetes—Alabama, 2013

<table>
<thead>
<tr>
<th>Factor</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age $\geq$ 55 years</td>
<td>47.4</td>
</tr>
<tr>
<td>Female</td>
<td>57.0</td>
</tr>
<tr>
<td>White</td>
<td>72.3</td>
</tr>
<tr>
<td>Annual household income $&lt;$ $25,000</td>
<td>42.9</td>
</tr>
<tr>
<td>Body mass index (BMI) $\geq$ 25</td>
<td>82.6</td>
</tr>
<tr>
<td>Physical activity guidelines met</td>
<td>9.8</td>
</tr>
</tbody>
</table>
### Adjusted Odds for Prediabetes by Risk Factors—Alabama, 2013

<table>
<thead>
<tr>
<th>Factor</th>
<th>Increased Odds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age ≥55 years</td>
<td>3.4</td>
</tr>
<tr>
<td>Female</td>
<td>1.3</td>
</tr>
<tr>
<td>Body mass index (BMI) ≥25</td>
<td>2.4</td>
</tr>
<tr>
<td>Physical activity guidelines NOT met</td>
<td>1.5</td>
</tr>
</tbody>
</table>
Modifiable Risk Factors for Prediabetes

- Cannot control your age
- Cannot change your gender
- Can reduce your weight
- Can improve your exercise habits
Reducing Diabetes Risk

- **Even modest reduction in weight decreases diabetes risk**
  - 5–7% weight loss
  - 10–15 pounds

- **Recommended physical activity:**
  - 150 minutes per week of moderate to vigorous aerobic activity
  - Plus, muscle strengthening exercise twice per week

- **As little as 5-15 minutes per day has shown benefit**
How to Get There

- USPSTF and Community Guide recommend lifestyle modification courses
- Particularly successful if regular contact with a health mentor
- Multicomponent services: dietician, nutritionist, exercise trainer, behavioral counselor, health educator, trained layperson
National Diabetes Prevention Program

- Collaborative effort hosted at CDC
- Standard curriculum
  - Based on behavior change principles
- Cost effective intervention
- Covered by some healthcare insurers
- Lifestyle Coach training available
- Recognition program to certify organizations

More information:
www.cdc.gov/diabetes/prevention
Diabetes Screening

- So why do so many people NOT know they have prediabetes or diabetes?
- Are they being screened for it?
- If you don’t know you have it, you can’t fix it!
Diabetes Screening Recommendations

- **ADA recommends screening:**
  - Age ≥45
  - Overweight or obese with one other risk factor*

- **New USPSTF draft recommendation for diabetes screening:**
  - Age ≥45
  - Overweight or obese
  - First-degree relative with DM
  - Certain minority groups
    - Including African American, Hispanic/Latino, American Indians
  - Women with:
    - history of gestational diabetes
    - polycystic ovarian syndrome

- **Screen every 3 years**
  - Annual if higher risk or previously elevated values

*Additional risk factors include: racial/ethnic minority, hypertension, low LDL, high triglyceride, history of cardiovascular disease, gestational diabetes or insulin resistance, first degree relative with diabetes, physical inactivity, delivery of baby >9 lb
Self-reported Testing for Diabetes

- Nearly half (46.5%) of nondiabetic Alabama adults report NOT tested for diabetes <3 years
  - Includes 1 in 3 people aged ≥45 years
- Many lacking diabetes screening have other medical conditions increasing risk
  - 23.7% have high blood pressure
  - 33.8% have elevated cholesterol
# Personal Risk Factors for Lacking Diabetes Screening

<table>
<thead>
<tr>
<th>Factor</th>
<th>Prevalence Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>1.1</td>
</tr>
<tr>
<td>African American</td>
<td>1.1</td>
</tr>
<tr>
<td>Less than high school education</td>
<td>1.2</td>
</tr>
<tr>
<td>Annual household income &lt; $25,000</td>
<td>1.2</td>
</tr>
<tr>
<td>Normal or underweight</td>
<td>1.2</td>
</tr>
</tbody>
</table>
# Health System-related Factors for Lacking Diabetes Screening

<table>
<thead>
<tr>
<th>Factor</th>
<th>Prevalence Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>No health insurance</td>
<td>1.6</td>
</tr>
<tr>
<td>Gap in health insurance coverage</td>
<td>1.4</td>
</tr>
<tr>
<td>Perceived cost barriers to care</td>
<td>1.3</td>
</tr>
<tr>
<td>Lacks identified personal health provider</td>
<td>1.7</td>
</tr>
<tr>
<td>No medical checkup &lt;5 years</td>
<td>1.9</td>
</tr>
</tbody>
</table>
Barriers to Diabetes Screening

- **Financial barriers to health care access**
  - Lack of health insurance
  - Recent gap in coverage
  - Perceived cost barriers

- **Inadequate patient engagement in health care systems**
  - No recent general medical checkup
  - No identified personal health-care provider
Consequences

- Missed opportunity for early detection and treatment
- Earlier care reduces health complications and costs

You can manage diabetes

- Work with a health professional
- Eat healthy
- Stay active

- Blindness
- Kidney failure
- Heart disease
- Stroke
- Loss of toes, feet, or legs
Possible Solutions

- Increased awareness of diabetes and prediabetes
- Improved access to health insurance
- Patient-centered wellness homes
Summary

- Many Alabama adults not aware of prediabetes status
- Progression to diabetes reduced with lifestyle changes
  - Weight loss and physical activity are key
  - Lifestyle change programs proven effective
- Nearly half Alabama adults report no diabetes screening <3 yrs
  - Barriers to health care access or lack engagement in health systems
  - Early detection and treatment reduces complications and costs
Thank you!

Contact Information:

Crystal Franklin
Telephone: 334-206-3001
Email: crystal.franklin@adph.state.al.us

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.