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Disclosure to Participants

- Notice of Requirements For Successful Completion
  - Please refer to learning goals and objectives
  - Learners must attend the full activity and complete the evaluation in order to claim continuing education credit/hours.

- Conflict of Interest (COI) and Financial Relationship Disclosures:
  - Faith Foreman-Hays Dr.P.H., MPH, BA, LVN: Nothing to Disclose
  - Stephen Linder PhD: Novo Nordisk: Research Grant

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Welcome on Behalf of Mayor Sylvester Turner
Objectives:

• Describe the composite vulnerability framework, its rationale and measurement
• Apply framework to identify subpopulations as key candidates for primary prevention
• Propose ways to adapt this approach to enhance the quality of outreach and participant interactions

Today, two thirds of people with diabetes live in cities

2017
66%
OF PEOPLE WITH DIABETES LIVE IN URBAN AREAS

2045
75%
OF PEOPLE WITH DIABETES WILL LIVE IN URBAN AREAS

Cities influence how people live, travel and eat, which all have an impact on diabetes risk
22 partner cities in Cities Changing Diabetes® Representing more than 150 million people

We work in partnership to fight the rise of urban diabetes

Houston: Successful stakeholder engagement
Can we add a reference citing that the partnership is with Novo, Steno Diabetes Center Copenhagen, University College London?
Autumn Zarliengo, 7/8/2019
How the Coalition Built the 5 Initiatives

• Research to understand how and why people are vulnerable to developing diabetes
• Roundtables with different stakeholders (healthcare, public health, employers, community-based organizations, health insurance)
• Action Work Groups
• Implementation team following Shark Tank process
• Initiatives are stakeholder-developed, stakeholder-driven and stakeholder-funded
Current Initiatives in CCD Houston

- Developed by self-organizing and autonomous Action Work Groups
- Implemented by 2-3 organizations, typically from CCD Core Team
- Novo Nordisk funded only HDRC with seed capital

Overview of Initiatives

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Lead by/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Preparedness</td>
<td>American Diabetes Association, National Diabetes Education Coalition, Medical Centers for Disease Prevention</td>
</tr>
<tr>
<td>Disaster Preparedness</td>
<td>Houston Business Coalition on Health, American Diabetes Association, Medical Centers for Disease Prevention</td>
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<tr>
<td>Faith &amp; Diabetes Disasters Prevention</td>
<td>American Diabetes Association, National Diabetes Education Coalition, Medical Centers for Disease Prevention</td>
</tr>
<tr>
<td>Employer Worksite Wellness</td>
<td>American Diabetes Association, National Diabetes Education Coalition, Medical Centers for Disease Prevention</td>
</tr>
<tr>
<td>Peer Support</td>
<td>American Diabetes Association, National Diabetes Education Coalition, Medical Centers for Disease Prevention</td>
</tr>
</tbody>
</table>

- Developed "pop-up diabetes clinic" in emergency shelters
- Centers for Disease Control and Prevention funded pilot program to address prediabetes in worksite settings
- Online community with national resources and promotion of programs in Houston
- Train-the-trainer model to take Diabetes Self Management Education and Support into the community
- Provides a curriculum, and offers training and/coaching for a person with diabetes to lead a support group

- Concept being considered by Harris County Office of Emergency Management
- 2,500 employees from 8 employers participate in 12-month Diabetes Prevention Program
- Diabetes hotline with Community Health Workers being planned
- 41 community health champions from 23 Muslim, Christian and Hindu houses of faith currently implementing the program
- 50 participants meet biweekly at 7 locations. 75 participants in Facebook peer support group
What's the Secret Sauce?

- Multi-sector coalition
- Self-organizing Action Work Groups
- Understanding and appreciating the Houston environment, including diversity
- Encouraging competitors to collaborate on solutions
- Open solution development process with strong involvement of patients since Day 1
- Identification of national models that Houston could adapt and innovate further
- Novo Nordisk allowed for local process to take off and didn’t steer stakeholders to solutions
- Strong involvement of CDEs across all Action Work Groups

Come See Us:

- Exhibit Hall next to City of Houston Booth
- Today at 3:15PM:
  - Cities Changing Diabetes: Faith & Diabetes Initiative Part I: Adapting DSMES In Communities of Faith
- Today at 4:30PM:
  - Cities Changing Diabetes: Faith & Diabetes Initiative Part II: Working with Communities of Faith

Chronic Disease Vulnerability in Houston:

*The Research Guiding Cities Changing Diabetes*

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#AADE19
What is Composite Vulnerability?

Vulnerable Neighborhood
Economic Disadvantage
Biological Risk

Vulnerable Neighborhoods

Identify Profiles among residents With Diabetes
Search for those Profiles among residents Without Diabetes

Profiles of Vulnerability
Vulnerability Mapping
Where is vulnerability concentrated?
Economic Disadvantage
Three indicators used to represent economic disadvantage in Houston:
- Public Assistance
- Financial Hardship
- < 199% Federal Poverty Level

Biological Risk Factors
Three (self-reported) risk factors reliably distinguish people with diabetes in Houston from those without:
- High blood pressure
- Age > 45 years
- Body Mass Index > 26.9

Four Levels of Composite Vulnerability
Five Most Common Social and Cultural Factors

- Salience of neighborhood change and transition 77.6%
- Sense of being financially constrained 44.8%
- Practices “nourishing traditions” 42.4%
- Does long commutes by car 41.6%
- Experiences severe time pressure 40%

THE FACE OF DIABETES IN HOUSTON

Four distinct risk profiles are most vulnerable to develop diabetes in Houston:

- Isolated Skyflicks
  - Disconnected from community, lack access to health care
  - High biomedical risk, Economically disadvantaged

- Financially Pressured Caregivers
  - Caregiving responsibilities, long commutes
  - Low biomedical risk, Economically secure

- Concerned Seniors
  - Low health literacy, dealing with change and aging
  - High biomedical risk, Economically disadvantaged

- Time-Pressed Young Adults
  - Long time pressure, poor information to make choices
  - Low biomedical risk, Economically secure

From Research to Community Health Interventions

- Vulnerability to diabetes is a complex composite of social, economic and biological factors
- Composite vulnerability is reinforced by social and cultural factors that make change more difficult in several distinctive ways
- These factors mediate both opportunities for, and barriers to, health improvement and should be carefully considered in the design of public health interventions