



***SAMHSA-HRSA  
Center for Integrated  
Health Solutions***

**Diabetes Self-Management**  
*from A to Z!*



*People Get Better With Us*

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Clinical Assistant Professor, NYU School of Medicine

# Who we are

NYC not-for-profit

108 programs, 10,000 individuals, majority in  
Brooklyn: housing, case management, ACT,  
clinics, homeless shelters, health home, and  
PROS

Founded Health Care Choices FQHC

In housing and case management:

- >70% schizophrenia / schizoaffective

Primarily paraprofessional workforce



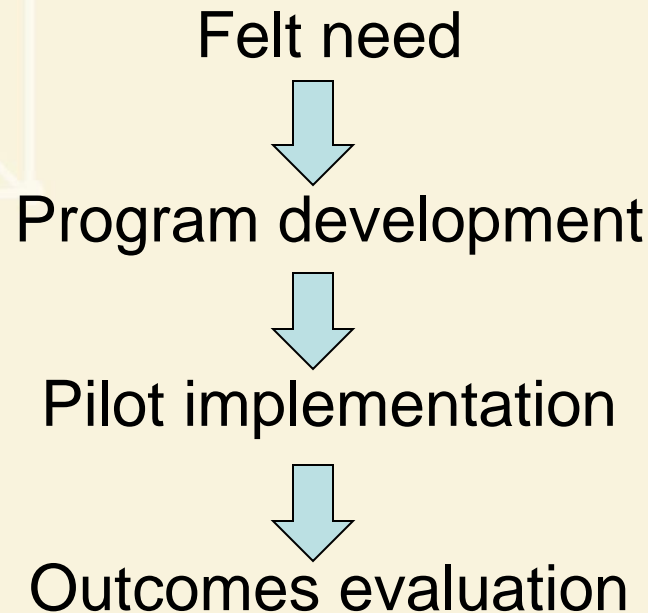
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# Objectives

At the end of this discussion, participants will be able to:

- ❑ Describe the rationale for integrating treatment of diabetes into behavioral health care
- ❑ Identify the risks associated with diabetes and key components of effective diabetes self-management
- ❑ Understand steps an organization can take to develop, implement and evaluate a chronic disease self-management program

# Creating a Diabetes Self-Management Program





# *SAMHSA-HRSA Center for Integrated Health Solutions*

**Felt need**



# The Crisis

People with serious mental illness (SMI) die an average of 25 years earlier than those in the general population

60% of excess mortality is due to treatable and preventable medical conditions (eg, heart disease, stroke, diabetes)

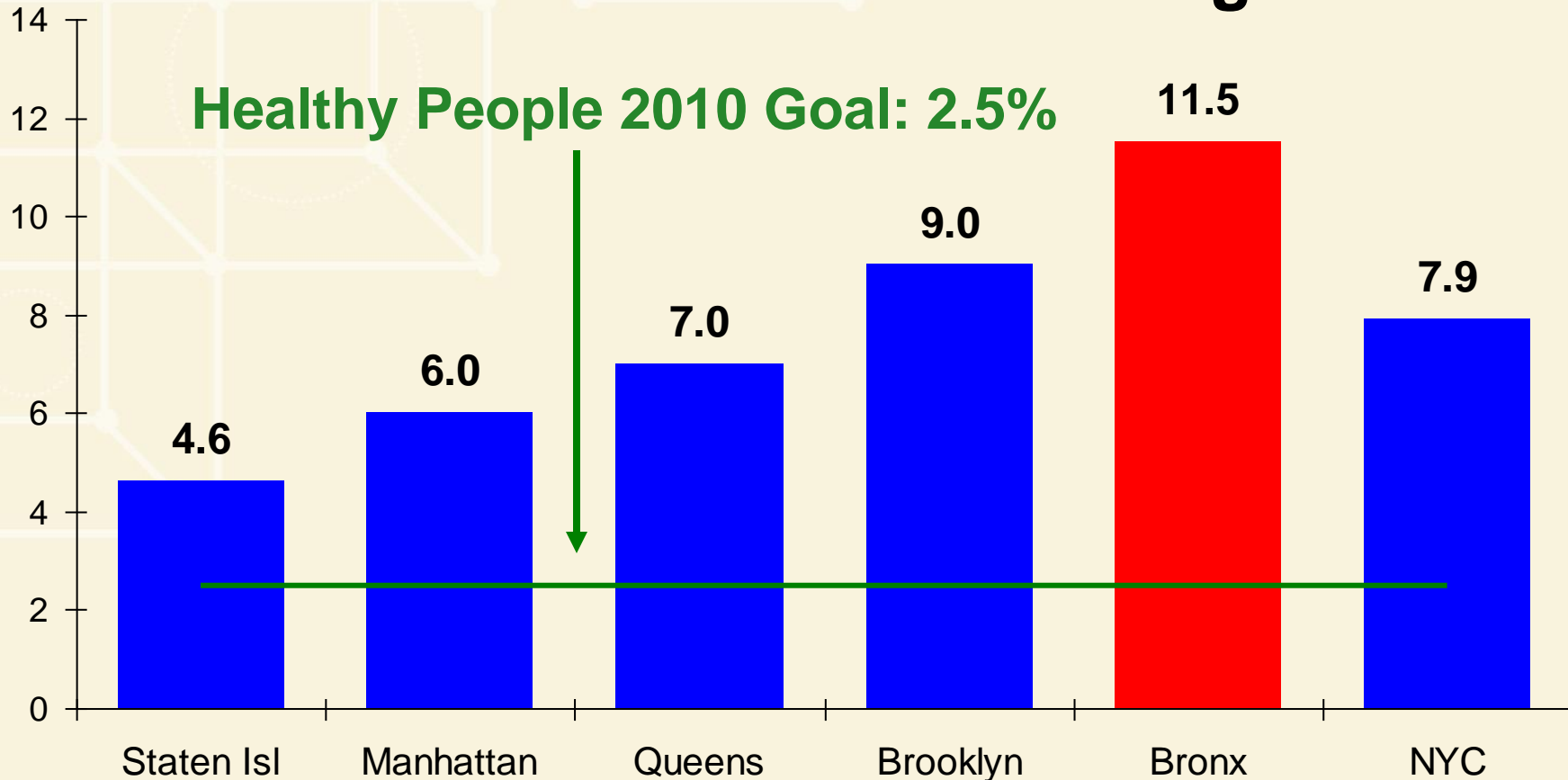
25% of deaths are attributable to alcohol, tobacco, and illicit drug use, which also increase the risk of physical health conditions

# Diabetes

- 12% of the US population (39 million) have diabetes
  - 4% are undiagnosed
- Diabetes is the 7th leading cause of death
- \$174 billion in medical costs and lost productivity
  - 10% of health care dollars spent on diabetes

CDC 2009-12

# Diabetes Prevalence in NYC Boroughs





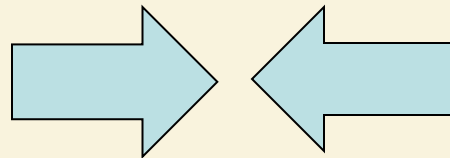
# Poll: Diabetes Prevalence

What percentage of your program's participants have diabetes?

- a. 0-10%
- b. 10-20%
- c. 20-30%
- d. Over 30%
- e. I'm not sure

## Diabetes in behavioral health

- People with serious mental illness are more than twice as likely to have diabetes
- People with diabetes are more than twice as likely to have depression, which complicates diabetes management



# Why are people with mental illness at greater risk?

**Symptoms** of mental illness such as avolition and low energy lead to reduced physical activity

Changes in appetite, medication side effects and income make it harder to maintain a healthy **diet**

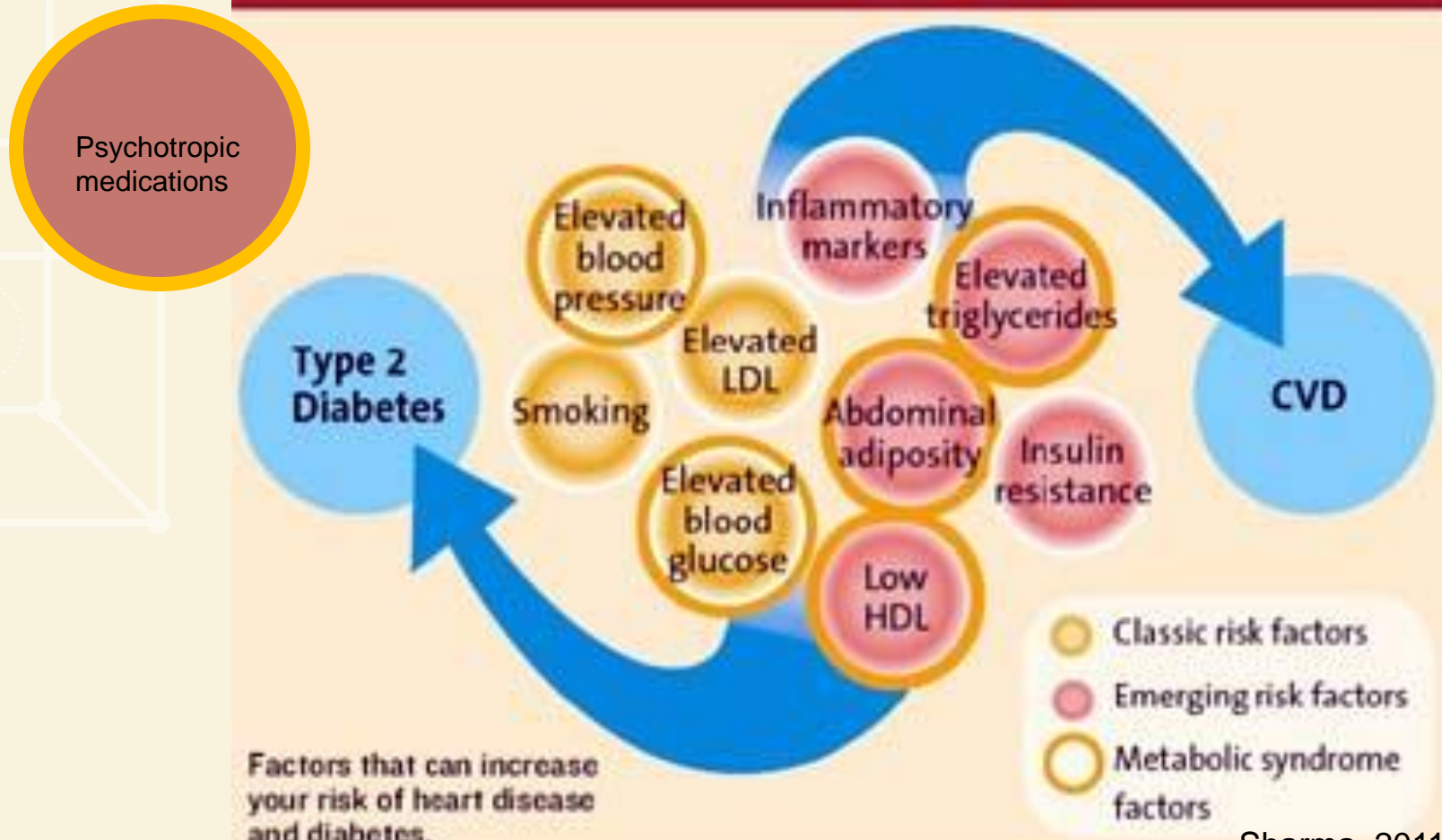
**Substance use** increases symptoms, worsens self care and has direct health effects

Some **medications** e.g. antipsychotics increase risk of diabetes

**Trauma** (adverse and highly stressful life events) are associated with health risks including diabetes

People with mental illness rarely receive needed health care **interventions**

# Cardiometabolic risk



Factors that can increase your risk of heart disease and diabetes.

Sharma, 2011

# Metabolic monitoring for atypical antipsychotics

**Table 1**

Recommended screening guidelines and frequency for adults taking second-generation antipsychotics<sup>a</sup>

Parameter <sup>b</sup>	Measurement Method	Abnormal cutoff	Measurement period						
			Baseline	4 weeks	8 weeks	12 weeks	Every 3 months	Annually	
Medical or family history	Interview	na	✓						✓
Weight (BMI)	Office	>7% weight gain over baseline OR $\geq 25 \text{ kg/m}^2$	✓	✓	✓	✓		✓	
Waist circumference	Office	Men: 40 inches; women: 35 inches	✓						✓
Blood pressure <sup>c</sup>	Office	$\geq 140/90 \text{ mmHg}$	✓				✓		✓
Nonfasting HBA1c or random plasma glucose <sup>d,e</sup>	Venipuncture	Diabetes, $\geq 6.5\%$ ; prediabetes, $\geq 5.7\%$ ; OR diabetes, $\geq 200 \text{ mg/dl}$ ; prediabetes, $\geq 140 \text{ mg/dl}$	✓				✓		✓
Nonfasting TC and HDL (non-HDL=TC-HDL) <sup>e,f</sup>	Venipuncture	Non-HDL, $\geq 220 \text{ mg/dl}$ ; OR 10-year risk, $\geq 7.5\%$ <sup>g</sup>	✓				✓		✓

Vanderlip et al, 2014



## Trauma: the ACEs study

Adverse Childhood Experiences (ACE) Study

Middle class sample of >10,000

22% sexually abused as children

66% women experienced abuse, violence or family strife in childhood

Increased risk of mental illness, heart disease, liver disease, diabetes, early death

Felitti et al, 1998

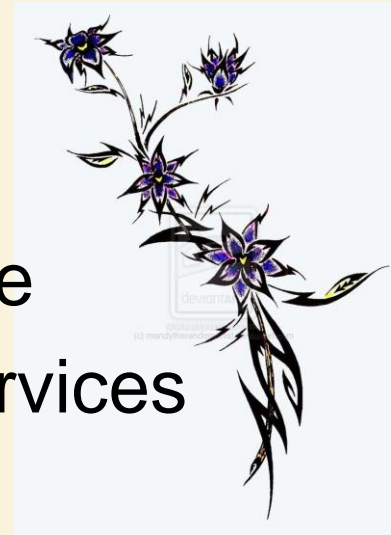


# Trauma and health behaviors

ACE's increased smoking, substance abuse,  
sexual promiscuity

Trauma affects:

- Sense of future and hope → self care
- Ability to trust providers → use of services



# Why do people with mental illness have difficulty accessing care?

The behavioral health workforce receives minimal training on physical health issues

Physical health problems are often misidentified as mental health symptoms or intoxication

Discrimination based upon mental illness, addictions, race and socioeconomic factors

Fragmentation of the health care system with poor information sharing

Financing and regulatory issues





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## Program development

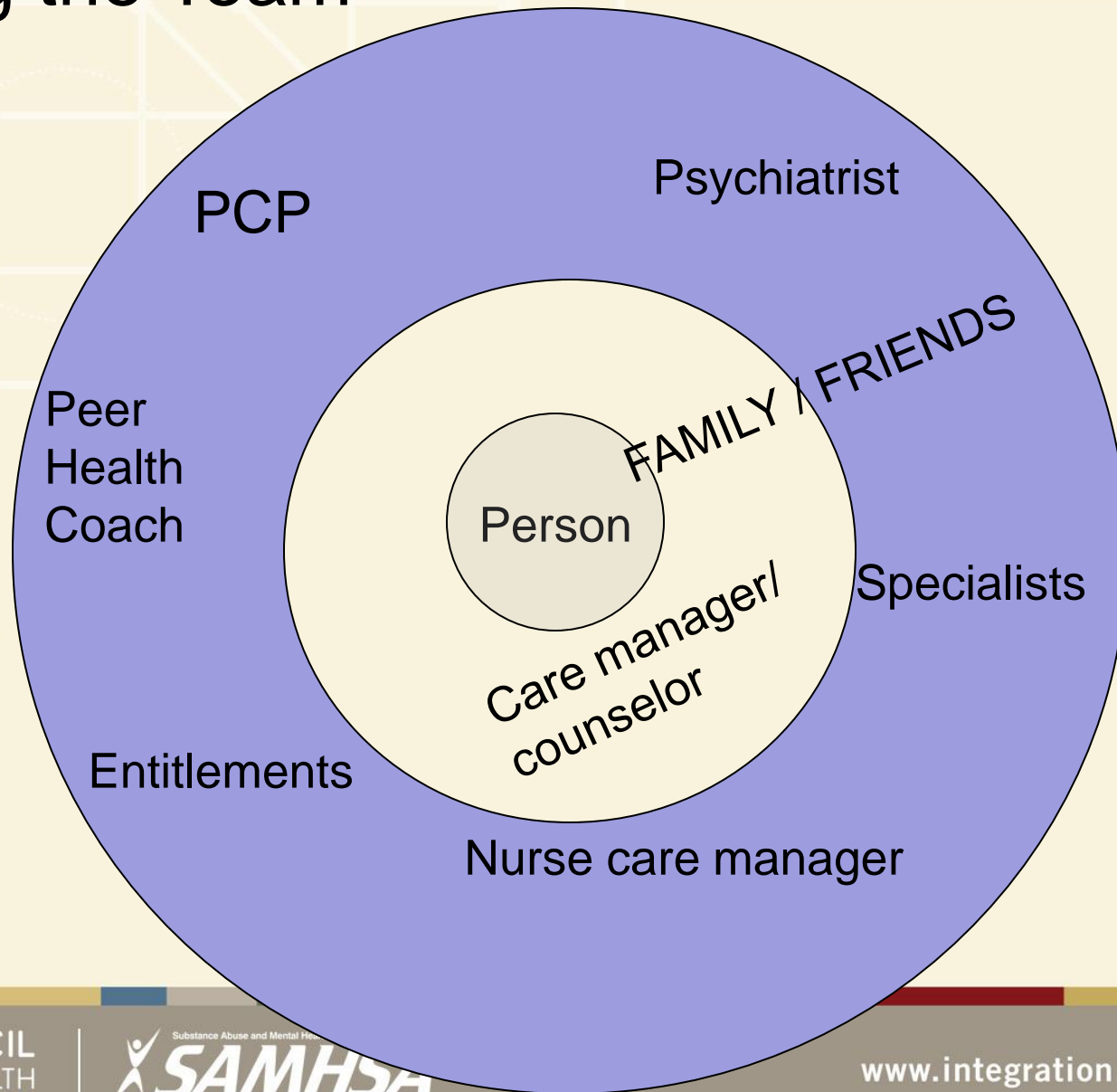
# Designing a best practice disease self-management program

The individual directs care provided by a  
multidisciplinary support team

Care is aligned with readiness for change

Wellness education gives people skills, problem-  
solving strategies and options for change

# Building the Team



# Stages of Change

## Pre-Contemplation

I don't think I have to change anything.

## Contemplation

I'm thinking of making a change.

## Preparation

I'm ready to change and I'm making an action plan to achieve my goal.

## Action

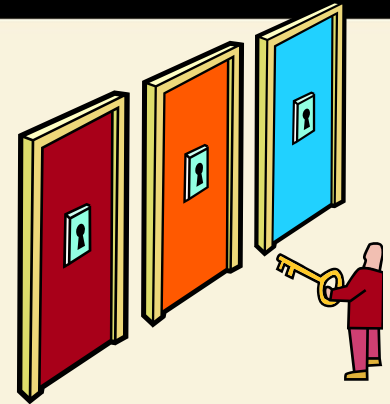
I'm working on my action plan.

## Maintenance

I have achieved my goal and am keeping up the good work.

## Recurrence

I took a step backwards but I can make a plan to get back on track.





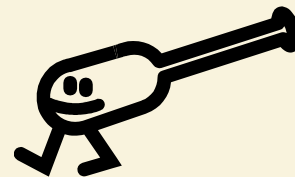
# Motivational interviewing basics:

Open Questions

Affirmations

Reflective Listening

Summarization



Expressing Empathy

Developing Discrepancies

Rolling with Resistance

Self-Efficacy





## **F.R.A.M.E.S:**

**Feedback** regarding health behaviors, strengths and needs (e.g., reviewing Diabetes Skills Scale).

**Responsibility** for change lies with the consumer, who has the right to make choices.

**Advice** about making healthy choices is given in a non-judgmental manner.

**Menu** of options for action steps towards change are offered and explored.

**Empathic Counseling** using warmth, respect and understanding.

**Self-Efficacy** and optimism are fostered to promote change.

# Wellness education tools

## ICL's Diabetes Self-Management Workbook

Knowing diabetes – ABCDEF's

Caring for your mental health

Choosing Healthy Foods

Being Physically Active

Taking Care of Feet

Taking Medication

Checking Blood Glucose

Having a Sick Day Plan

Quitting Smoking

Taking Care of Teeth



# What is Diabetes?

Diabetes is a disease where the body has difficulty keeping **blood glucose** (sugar) in check.

The body uses **insulin** to keep blood glucose in check.

A problem arises when:

- the body is not producing insulin (type 1 diabetes)
- the body is having trouble using the insulin, and can't produce enough insulin to make up for it (type 2 diabetes)

**High blood glucose can hurt your body!**



# Why is diabetes important?







**BAD NEWS:** diabetes can cause a lot of complications:

- Heart attacks
- Strokes (“brain attacks”)
- Kidney failure (needing dialysis)
- Blindness
- Foot infections, in the worst case leading to amputation

**GOOD NEWS:** if you take care of your health, you can **PREVENT** these complications!



# The Diabetes ABCDEF's

- A1C Level 
- Blood Pressure 
- Cholesterol 
- KiDneys 
- Eyes 
- Feet 

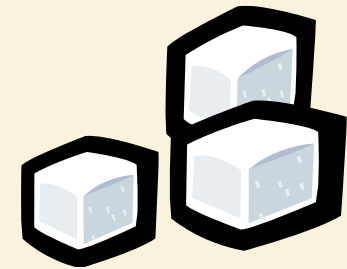




# The Diabetes ABCDEF's

## A – A1c

- Shows how well you have **controlled your blood glucose** in the last 2 to 3 months
- High blood glucose levels can hurt your heart, brain, kidneys, eyes and feet!
- The target A1c is **less than 7**



## B – Blood Pressure

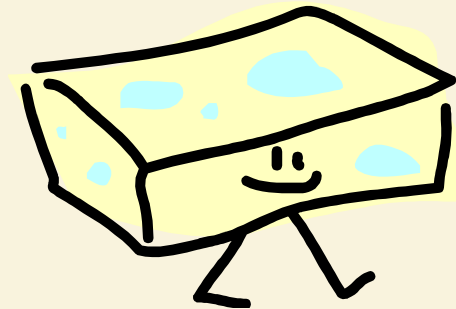
- If you have high blood pressure, it is **harder to get blood through** your blood vessels to your heart and brain
- If your heart or brain does not get enough blood, then you can have a heart attack or stroke
- The target BP is **below 130/85**



## C – Cholesterol

LDL (“lousy”) cholesterol can **coat blood vessels** with a fatty crust, causing high blood pressure

The target LDL is **less than 100**

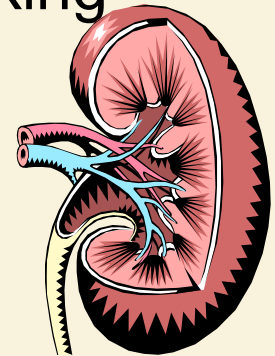


## D – kiDneys

(remember “Dribble”!)

If your kidneys are damaged and become “leaky,”  
**protein leaks out** from your blood into your urine

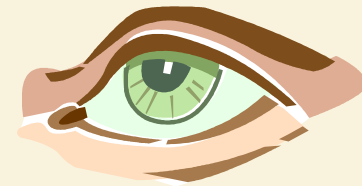
A urine test shows if protein is leaking. Blood tests  
can also show how well the kidneys are working



## E – Eye exam

Diabetes can damage your vision, but sometimes if you catch a problem **early on, it can be fixed**

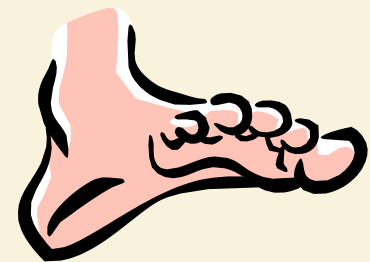
Get your eyes checked by an eye doctor (ophthalmologist or optometrist) once a year!



## F - Foot exam

Diabetes can damage the nerves and blood vessels in your feet, leading to **injuries and infection**

Look for redness, sores, calluses or injuries every day  
Get feet checked every 3 months!





# Healthy Foods: Myth and FACT!

## MYTH

- ☹️ I have to eat special diabetic foods
- ☹️ I can't eat sweets like candy or chocolate
- ☹️ I can keep my blood glucose low by skipping meals

## FACT!

- 😊 I can eat the same kinds of food as other people
- 😊 I can eat sweets as part of a healthy meal plan
- 😊 Skipping meals can make your glucose TOO LOW!  
Instead, eat a healthy breakfast, lunch, supper and bedtime snack to keep your glucose on target!

# Healthy Foods: Your Choices

When to eat:

→ Eat meals at regular times

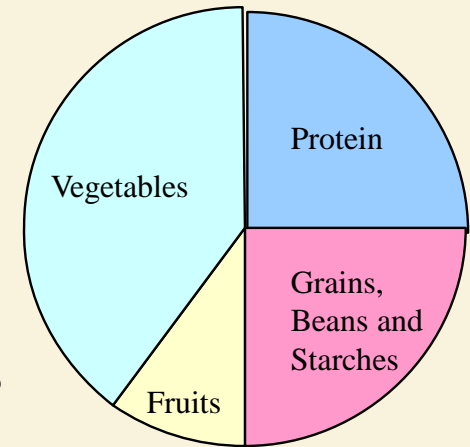
What to eat:

→ Eat food from all food groups

How much to eat:

→ Eat healthful-sized portions

→ Eat about the same amount of *carbohydrates* (“carbs”) at each meal



# What is a “carb”?

Anything that grows from the ground



## Examples:

- Fruit, Juice
- Vegetables, Beans, Corn
- Rice, Wheat, Barley, Potatoes
- Foods made with Flour or Sugar (cereal, pasta, bread, desserts)

## EXCEPTIONS:

- Milk and yogurt ARE carbs
- Nuts and vegetable oils are fats, NOT carbs

100% of carbs are turned into glucose

→ Eating the same amount of carbs every day keeps your blood glucose on target!

# Healthy foods- my choices





# Spirituality and integrated care

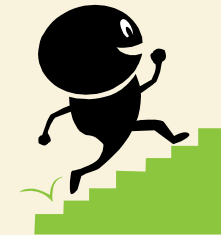
What are your beliefs around self care?

- Idea of the body as a temple or gift
- Stewardship

Does your spiritual community offer support around wellness and health care?



# Action Steps



Achievable mini-steps toward goals to develop momentum and success

- “I will drink water instead of a soda once a day.”
- “I will walk for 10 minutes every day.”





# Weighing the options

What changes have you thought of making?

What might you have to give up to make this change?

What might you gain by making this change?

How will your life be different if you make this change?

→ Is it worth it?





**Are you ready?**

# Action Step Planning

**I will take the following step:**

**I will do this action step by:**

**Who will help me to do this action step?**

**What mini-steps will I take to do this action step?**

**When will I take the first mini-step?**

**Where will I take the first mini-step?**

**How will I remind myself to do this action step?**

**Why do I want to do this?**

**If I succeed, my reward will be:**



# Action Step Review

## I achieved my goal!

- I will reward myself with:
- I succeeded because:
  - I committed myself to doing my action step
  - I reminded myself to do the action step
  - I focused on taking mini-steps
  - I had help from:



## I did not achieve my goal because:

***But that is no reason to give up! I can:***

- Make a new action step
- Problem-solve with someone who can help me
- Give myself a mini-reward for what I did achieve
- Remind myself of the reasons why I want to take this action step



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**Pilot implementation and  
outcomes evaluation**

## **Poll: What kinds of outcomes does your agency track (using a database)?**

- a. Mental health measures (rating scales)
- b. Physical health measures
- c. Inpatient and emergency department utilization
- d. More than one of the above
- e. We just track the cashflow



# Diabetes Co-morbidity Initiative

In partnership with Urban Institute for Behavioral Health;  
supported by NYS Health Foundation

Phase I: planning

Phase II: 10 programs in 7 agencies

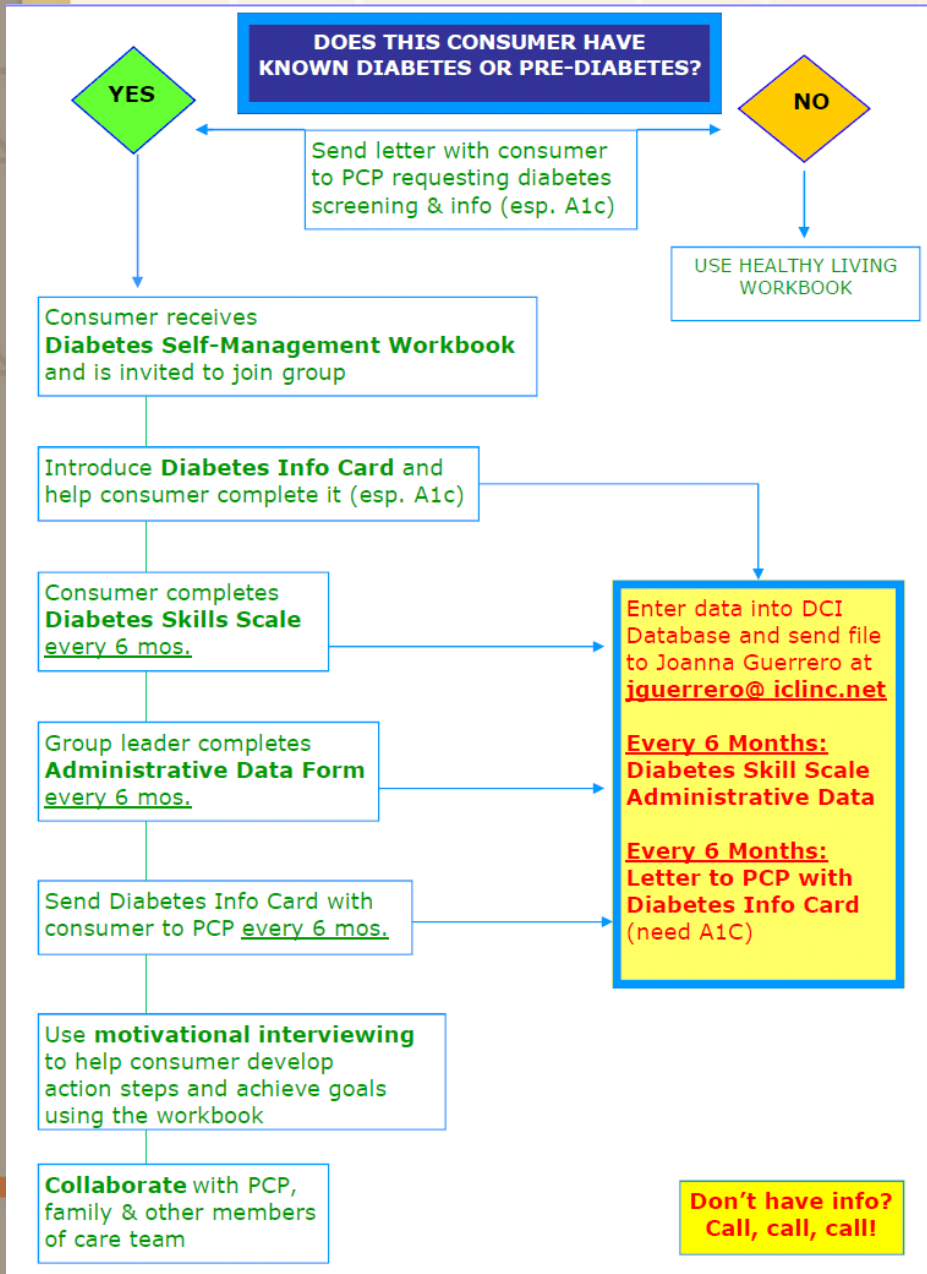
Phase III: 22 programs in 8 agencies

Expansion: 22 programs in 11 agencies, some outside  
metro NYC

324 staff trained

358 individuals enrolled (Sept 2010)

28 groups



**Diabetes ABCDEF's**

<b>A1c</b>	Every 3-6 months
<b>Blood Pressure</b>	Every 3 months
<b>Cholesterol</b>	Every year
<b>Kidneys</b>	Every year
<b>Eye Exam</b>	Every 3 months
<b>Foot exam</b>	Every 3 months

**Stages of Change:**

- Pre-Contemplation**  
I don't think I have to change anything.
- Contemplation**  
I'm thinking of making a change.
- Preparation**  
I'm ready to change and I'm making an action plan to achieve my goal.
- Action**  
I'm working on my action plan.
- Maintenance**  
I have achieved my goal and am keeping up the good work.
- Recurrence**  
I took a step backwards but I can make a plan to get back on track.

**Motivational Interviewing Basics:**

- Feedback** regarding health behaviors, given by reviewing Diabetes Skills Scale.
- Responsibility** for change lies with the consumer, who has the right to make choices.
- Advice** about making healthy choices is given in a non-judgmental manner.
- Menu** of options for action steps towards change are offered and explored.
- Empathic Counseling** using warmth, respect and understanding.
- Self-Efficacy** and optimism are fostered to promote change.
- Use Open Questions, Affirmations, Reflective Listening and Summarization.**
- And don't forget to Develop Discrepancies and Roll with Resistance!**

**R.O.P.E.S. Group Format**

- R** Review previous lesson, action steps, experiences and feelings on today's topic
- O** Overview of the material for today
- P** Presentation utilizes workbook
- E** Exercise utilizes action steps
- S** Summary of lesson, thoughts and feelings. Specific feedback to group

**Web Links:**

- American Diabetes Association [www.diabetes.org](http://www.diabetes.org)
- Joslin Diabetes Center [www.joslin.org](http://www.joslin.org)
- National Diabetes Education Program [www.ndep.nih.gov](http://www.ndep.nih.gov)
- NYC Dept. of Health [www.nyc.gov](http://www.nyc.gov)

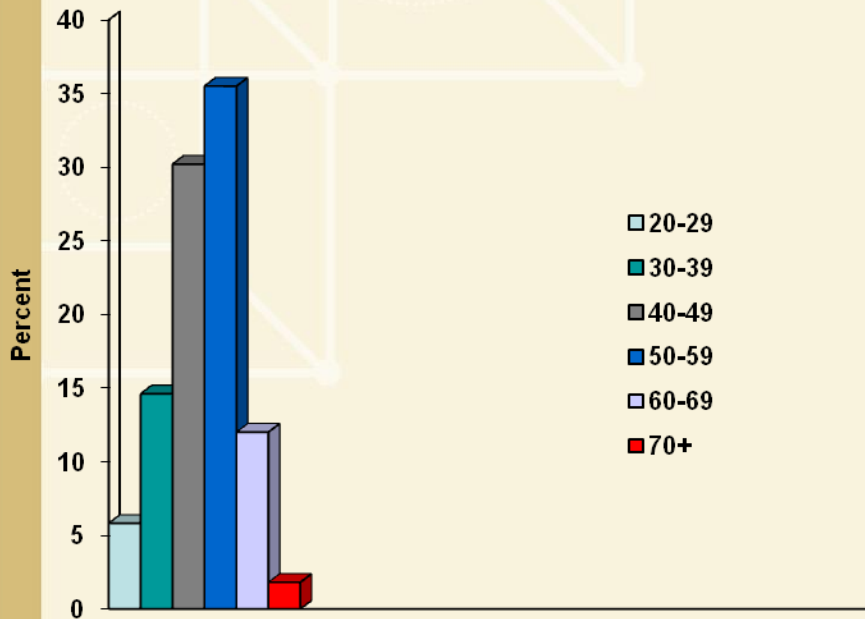
**Tips on Collaborating:**

- Keep a directory of helpful primary care providers (PCP) in the neighborhood.
- Inform PCP of any consumer health and mental health changes such as hospitalizations, detox/rehab, medication and diagnoses.
- Encourage consumers to inform PCP of any new symptoms that may be related to diabetes, e.g. weight changes, blurred vision.
- Use consumers' supports: Offer DCI materials that consumers can take home to family and friends and invite them to get involved.
- Work or school program? Consumers may need collaboration on arranging breaks for snacks, monitoring glucose or taking insulin.
- ICM's, ACT Teams and Home Care Attendants are important supports and should be aware of DCI.
- Remember to track client's health info in charts.

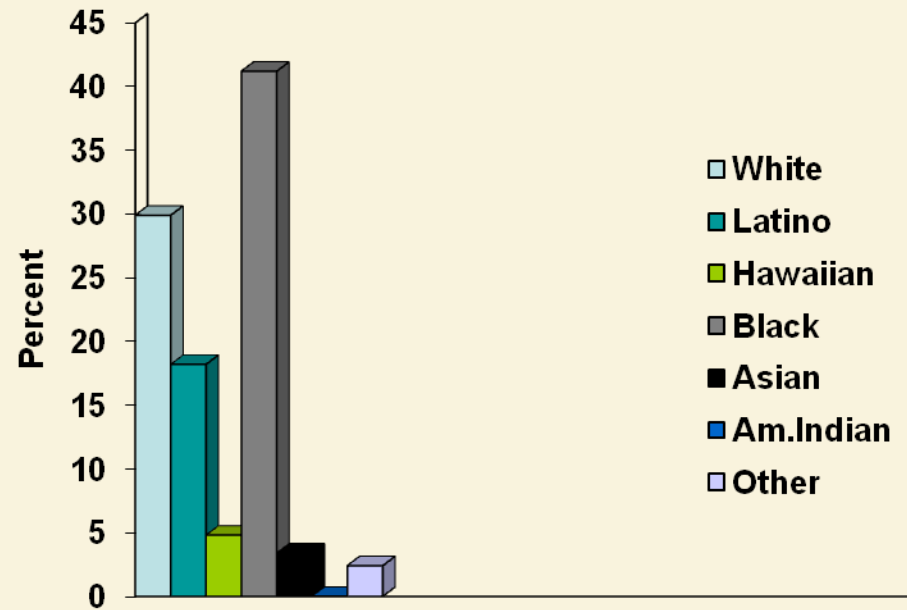
# Demographics

57.5% male

Age



Race



# Diabetes Skills Scale

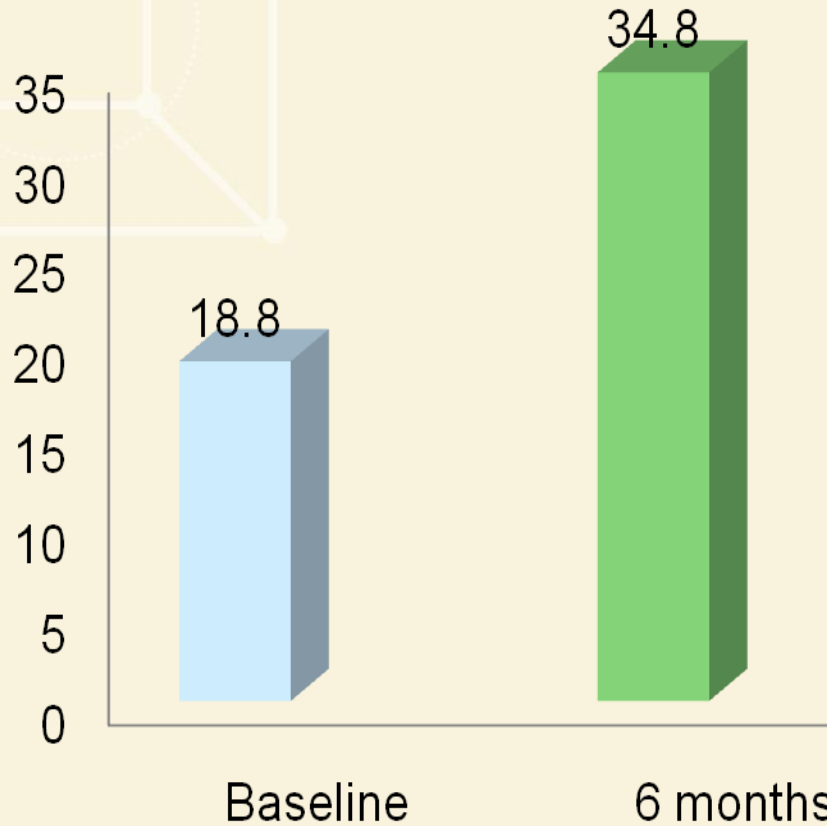
Significant self-reported improvements on all items in phase II/III, except “I take my meds as prescribed” which worsened

For phase II/III/expansion analysis, only the following items improved significantly\*:

- I choose healthy foods
- I check my feet every day
- I have effective ways of managing stress

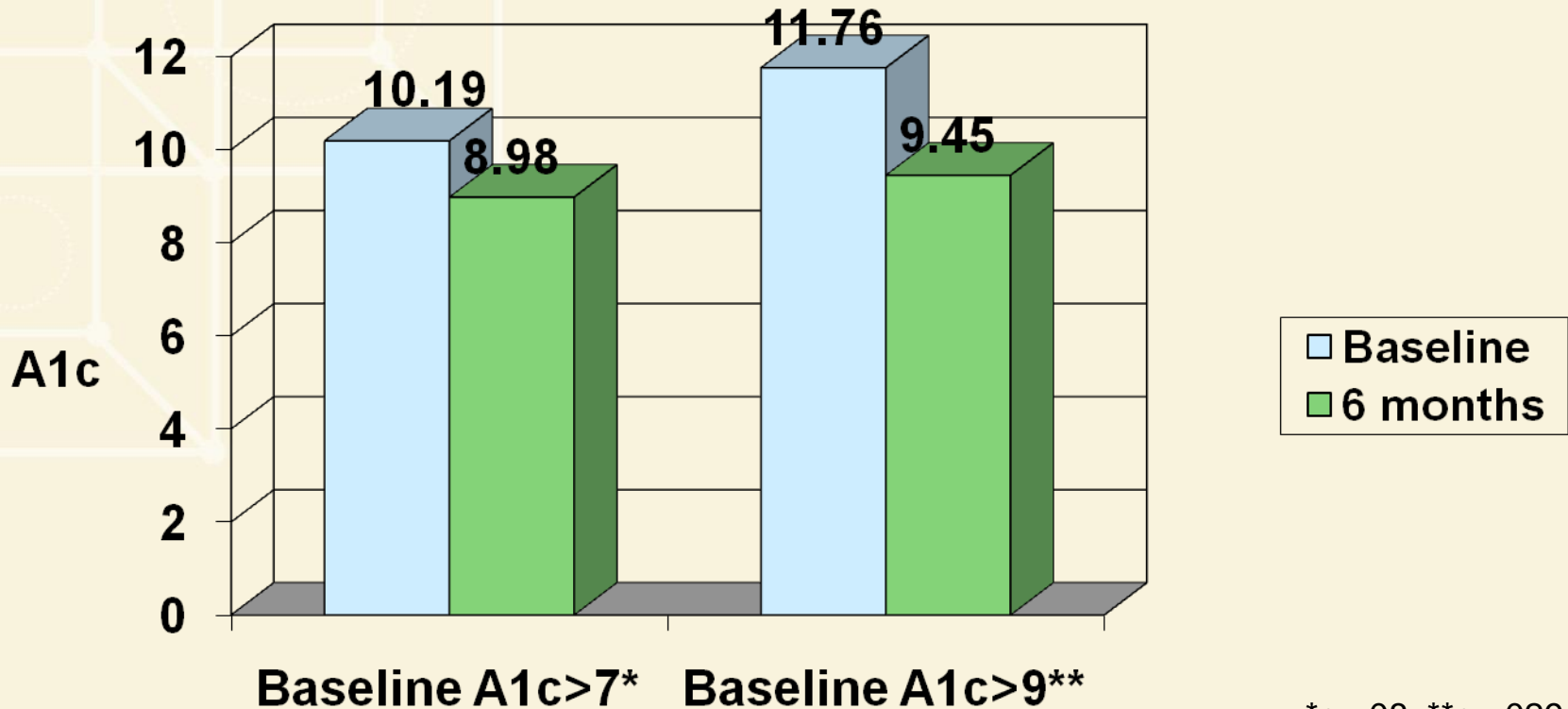
\*n=165, p<.01

# Diabetes ABCDEF' s: Percent reporting all 6 test dates



Difference significant on paired samples t-test (n=98, p<.000)

# A1c results



\*p<.08; \*\*p<.029

Phase II/III data. Results not significant when expansion data added, possibly d/t lower baseline A1c



# ER and Hospital Utilization

Significant decrease in number of ER visits and inpatient stays found on preliminary analysis of phase II/III data  
Significance lost when additional phase III and expansion consumers added

# Success Story

**B. lost 32 pounds and her A1c level dropped from 12 to 7 with participation in DCI**

“I joined the group because I needed to know more about my illness. Most helpful is that I learned that mental health and health are connected.”

“The workbook and the groups helped me to make changes in my life – I started to take care of my feet – I did not know I needed to see the podiatrist.

**“I had an infection on my foot. Before didn’t know I needed to get it checked out, that I could walk around with it and that it would heal by itself. After that section, I went directly to the foot doctor. I caught it just in time because of the information from the workbook.”**



## Take Home Points

- The people we serve in behavioral health agencies are **at risk for diabetes**, and almost a quarter already have it
- We can help people to understand diabetes self-management by teaching **simple concepts** like the ABCDEFs, with attention to the individual's **goals, values, culture and spiritual beliefs**
- Materials that **build in motivational interviewing** can support our staff in providing self-management education
- Tracking **outcomes** from the outset supports change



# *SAMHSA-HRSA Center for Integrated Health Solutions*

Please feel free to contact us at [HealthyLiving@ICLinc.org](mailto:HealthyLiving@ICLinc.org)

# Thank you!



*People Get Better With Us*

## **Poll: Progress**

**At this point in the Innovation Community: What best describes your progress in developing a CDSM approach?**

- A.** We've made more progress than we anticipated
- B.** We've made significant progress
- C.** We've made some progress and expect to continue
- D.** We've made little progress



## **Poll: Willingness to share**

For programs that have made significant progress (A or B), please indicate your willingness to share what you have accomplished and lessons learned as part of a future webinar

- A.** We're willing and able to share ideas that will be helpful to others
- B.** We're willing and able but not sure we have ideas that would be helpful to others.
- C.** Would like to discuss with Tony further before we make a decision



# Let's Chat

**For organizations that haven't made as much progress as you wanted/ expected:**

Please type in the most important barrier/challenge that you have encountered

# Poll: Self-assessment guide

**How helpful was the self-assessment guide as a planning tool?**

- A. Very helpful
- B. Helpful
- C. Neutral
- D. Not that helpful

# Let's Chat

**We now have 4 months left in this learning community.** What would be most helpful to you in supporting your efforts to implement CDSM approaches?

For example:

- small group call with other Innovation Community members
- Individual consultation call with Tony
- Webinar on a particular topic
- Other

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# Upcoming Webinars

June 25, 2015

July 30, 2015

August 20, 2015

All webinars are from 2:00 – 3:30 PM ET