Promoting Behavior Change in Type 2 Diabetes

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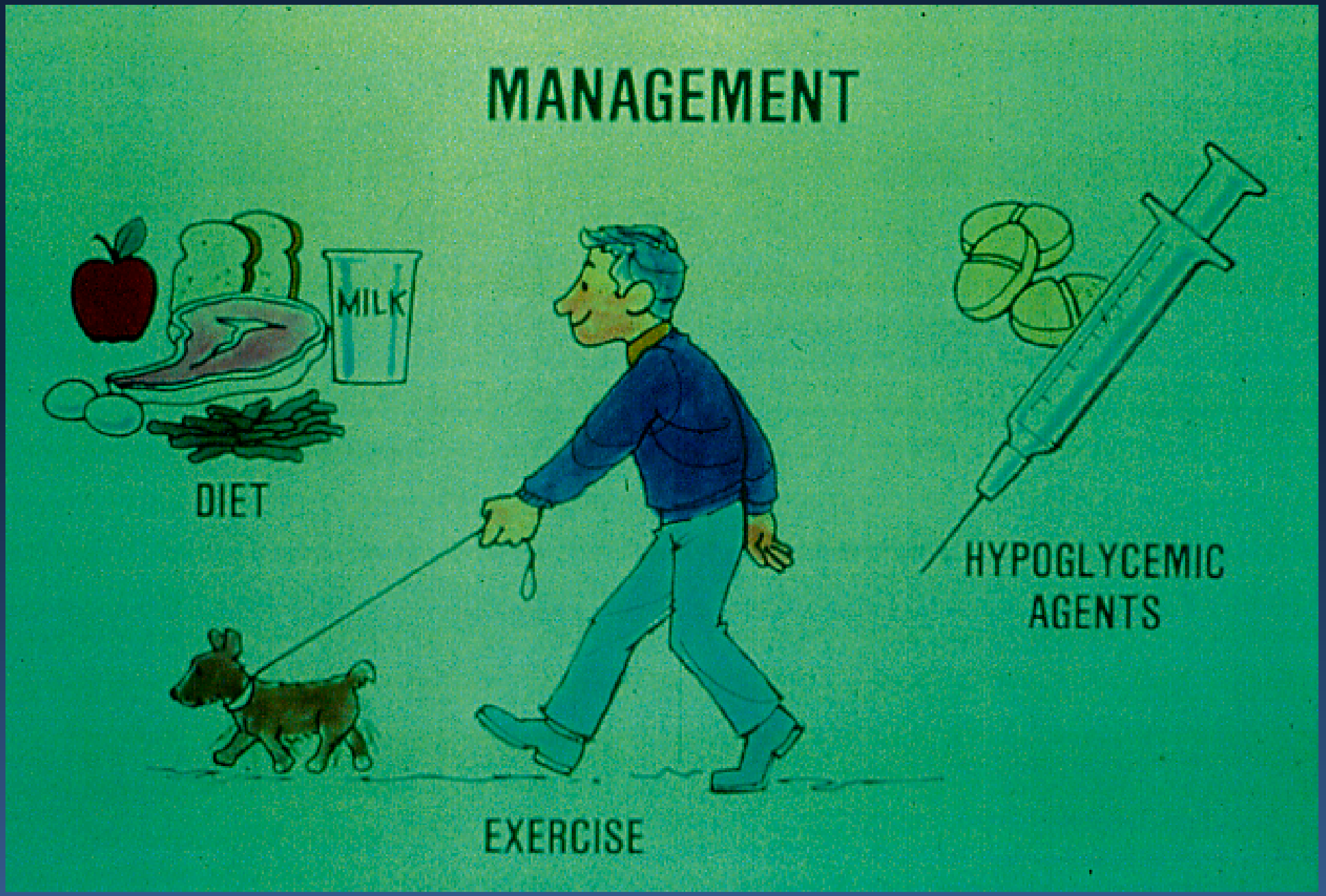
May 24, 2017


MANAGEMENT
MILK
DIET
HYPOGLYCEMIC
AGENTS
EXERCISE

Three Operating Principles

1. Living with diabetes can be tough

Three Operating Principles

1. Living with diabetes can be tough
2. The typical reasons why we think its tough are wrong

HCP Attributions Regarding Problem Patients

HCP top 5 complaints about patients with diabetes:

1. Patients say they want to change, but are not willing to make the necessary changes
2. Not honest/Only tells me what they think I want to hear
3. Don't listen to my advice
4. Diabetes not a priority/Uninterested in their condition/ "In denial"/Don't care/Unmotivated
5. They do not take responsibility for self-management

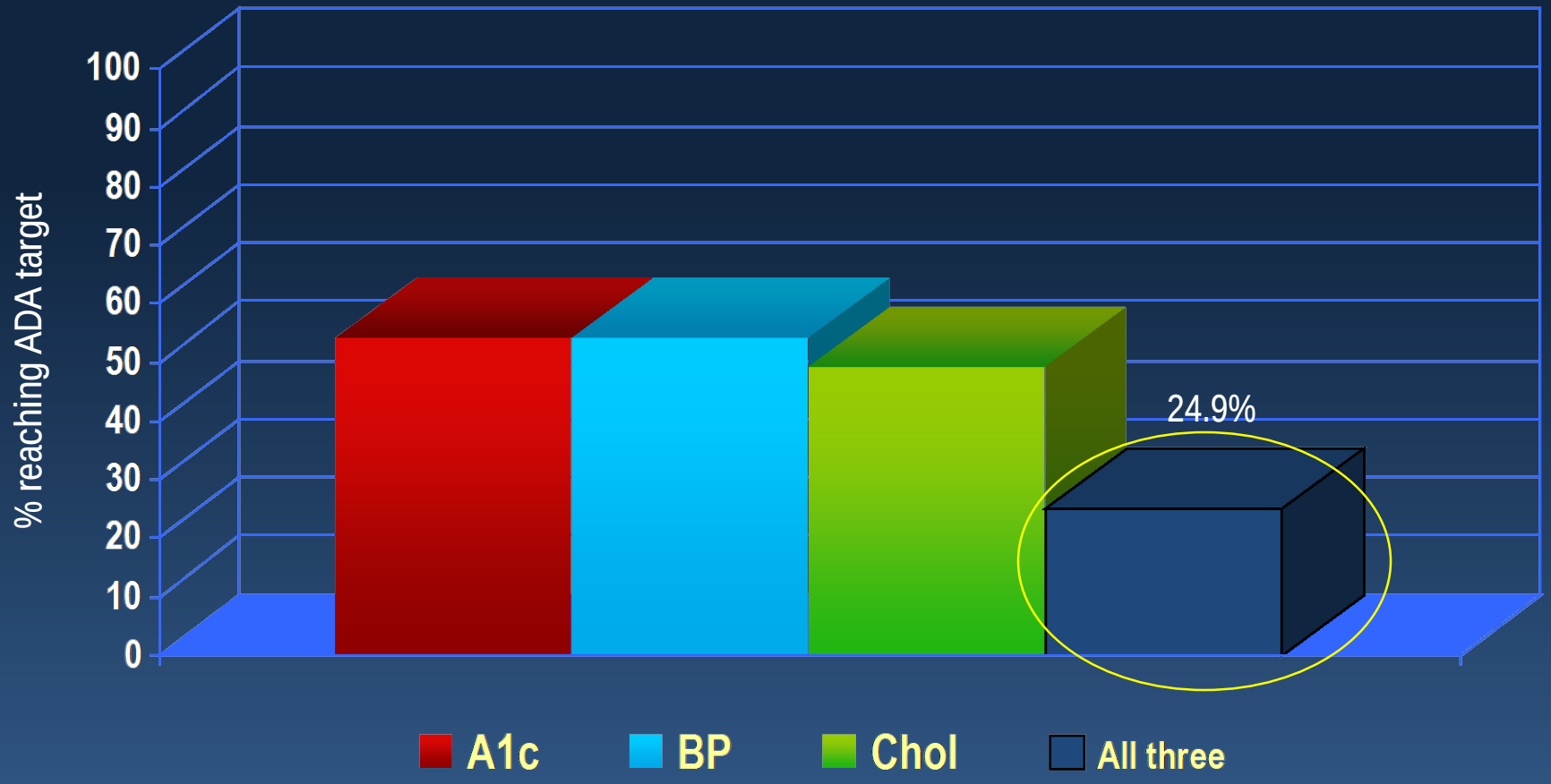
Edelman et al, 2012


I will be Good
I will be Good
I will be Good
I will be Good
I will be Good
I will be Good
I will be
I will
I will
DUNCE

Three Operating Principles

1. Living with diabetes can be tough
2. The typical reasons why we think its tough are wrong
3. No one is truly unmotivated to live a long and healthy life

Percentage of Patients Achieving ADA Treatment Targets



Wong et al., 2013

Motivation in Diabetes

- If no one is unmotivated, then what's the problem?
- Obstacles to self-care outweigh possible benefits
  - The benefit conundrum
  - And there are a TON of obstacles!
  - The underlying theme to most obstacles is a lack of "worthwhileness"

Lack of Worthwhileness

Lack of Worthwhileness

- An invisible and non-urgent disease

"Look, I'll start worrying about my diabetes as soon as something something falls off."

Lack of Worthwhileness

- An invisible and non-urgent disease
- Hopelessness

"What's the difference? This disease is going to get me no matter what I do.

Lack of Worthwhileness

- An invisible and non-urgent disease
- Hopelessness
- Discouragement

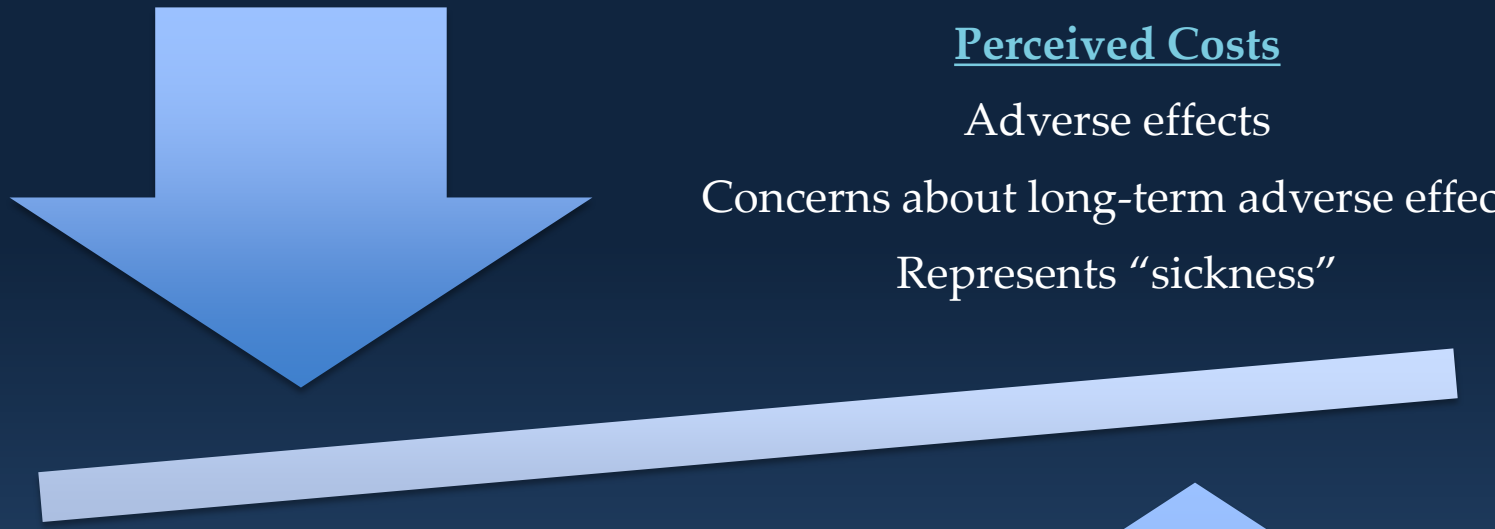
"I did everything I was supposed to, and now you're telling me I have to take even more medications?!"

Lack of Worthwhileness

- An invisible and non-urgent disease
- Hopelessness
- Discouragement
- Perceived costs are too high

"Taking all of these pills can't be good for me."

Patient Medication Beliefs



Perceived Costs

Adverse effects

Concerns about long-term adverse effects

Represents "sickness"

Perceived Benefits

Rarely apparent

HCP may state that long-term risks are reduced


Saiontz & Kirk, P.A.
www.YouHaveALawyer.com
Failure to Warn Claims
Invokana\Invokamet
Farxiga
Jardiance
Glyxambi
Xigduo XR
Call Now
If You Suffered
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Kidney Failure
Heart Attack
Wrongful Death
1-888-LAW-2390


VITAMIN WORLD

Lack of Worthwhileness

- An invisible and non-urgent disease
- Hopelessness
- Discouragement
- Perceived costs are too high
- Competing environmental demands

"I don't have time for exercise and stuff like that."

Lack of Worthwhileness

So What To Do?

A. Making the Invisible Visible

Table 2
Participants understanding of HbA1c.

Question	Yes
(1) Report having had an HbA1c test: *n* (%)	46 (55.4)
(2) Knew what HbA1c is and gave a correct definition: *n* (%)	44 (53.0)
(3) Reported their last HbA1c test result: *n* (%)	40 (48.2)
(4) Gave a correct HbA1c value: *n* (%)	22 (55.0)
(5) Good understanding of HbA1c (were aware of having an HbA1c test, could accurately report their most recent test result within 0.5% and could define HbA1c)	22 (26.5%)

Beard et al, 2010

Table 1 – Laboratory test results.

Variable	At admission	10 days after admission
Glucose, mg/dL	108	65
Hematocrit, %	38.5	21
Hemoglobin, g/dL	13.7	7.2
Leukocytes, mm³	6,300	41,000
Platelets, mm³	201,000	25,000
Creatinine, mg/dL	0.6	3.8
Urea, mg/dL	25	128
ALT, U/L	28	298
AST, U/L	56	65
Total protein, g/dL	7.4	4.6
Albumin, g/dL	3.7	1.8
GGT, U/L	34	536
Alkaline phosphatase, U/L	ND	7,960
LDH, U/L	234	ND
Total bilirubin, mg/dL	0.53	12.9
Direct bilirubin, mg/dL	0.23	9
Indirect bilirubin, mg/dL	0.35	3.9
PTT, s	28	ND
INR	0.7	1.3
Total cholesterol, mg/dL	242	ND
HDL, mg/dL	31	ND
LDL, mg/dL	141	ND
Triglycerides, mg/dL	202	ND
ESR, mm/h	ND	52
Calcium, mg/dL	8.8	ND
Iron, mg/dL	ND	50
Ferritin, ng/dL	ND	690.6
Sodium, mEq/L	141	144
Potassium, mEq/L	4.1	4.7

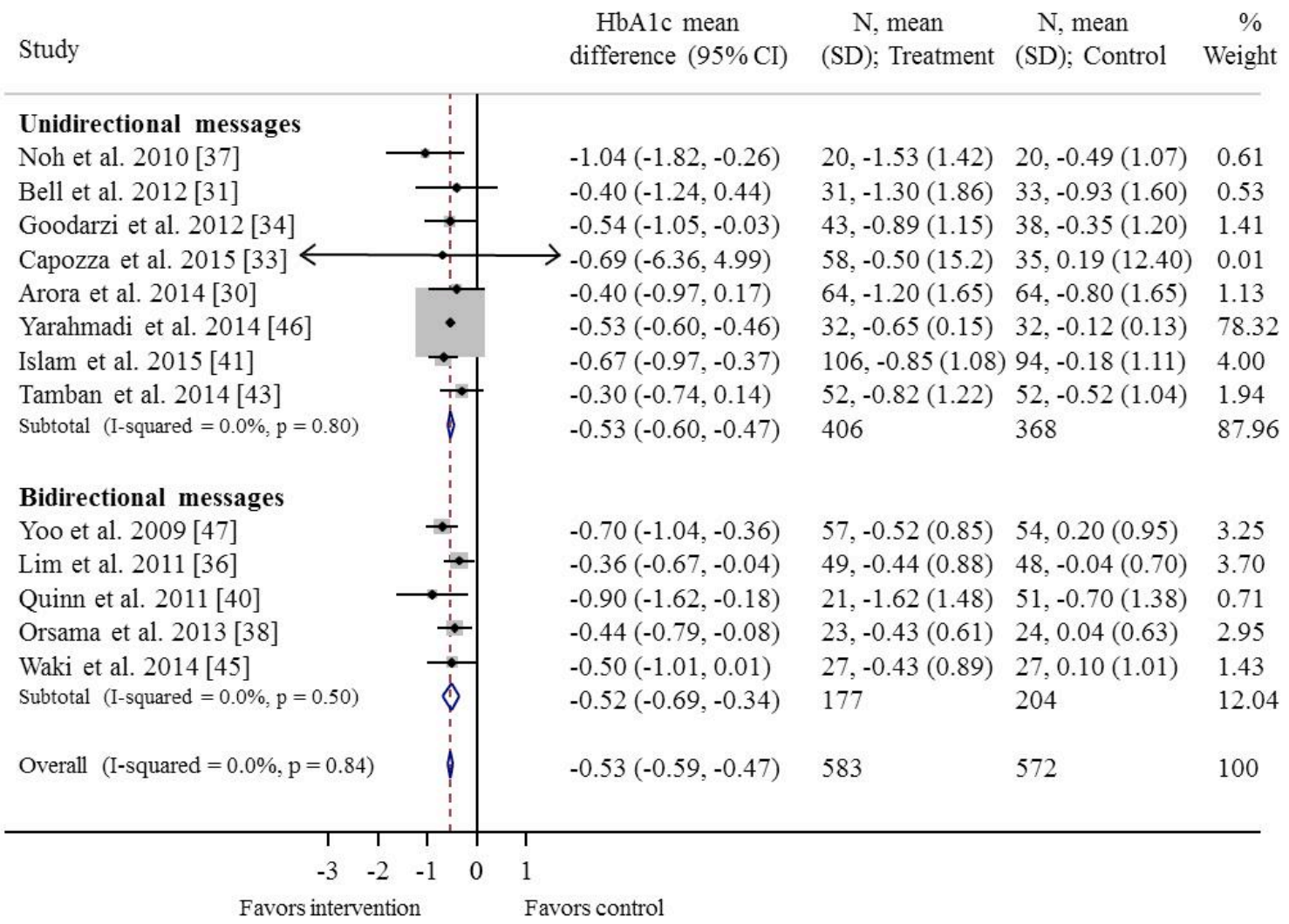
ALT: alanine aminotransferase; AST: aspartate aminotransferase; GGT: gamma-glutamyl transpeptidase; ND: not determined; LDH: lactate dehydrogenase; PTT: partial thromboplastin time; and INR: international normalized ratio.

Back on Track Feedback			Name: *Molly B.*	
Tests	Usual Goals	Your Results	FID #:	
	Your score should be		***SAFE**: At or better than goal*	***NOT SAFE**: Not yet at goal*
A1C	7.0% or less	*8.7%*		x
Blood Pressure	130/80	*125/75*	*x*	
LDL	100 or less	*116*		*x*

Personalized A1C Feedback

Reference	Type	Number of subjects	A1C Difference
Chapin et al, 2003	Chart in medical record, conversation presumed	127 T2D adults	0.7%*
Levetan et al, 2002	Laminated poster, then call from educator	150 T1D/ T2D adults	0.5%*
O'Connor et al, 2009	Periodic mailed brochures, no discussion	3703 T1D/T2D adults	0.0%
Sherifali et al, 2011	Periodic mailed brochures, no discussion	465 T2D adults	0.1%

B. Stay in Touch



Arambepola et al, 2016

C. Address Hopelessness

Q. Diabetes is the leading cause of adult blindness, amputation, and kidney failure. True or false?

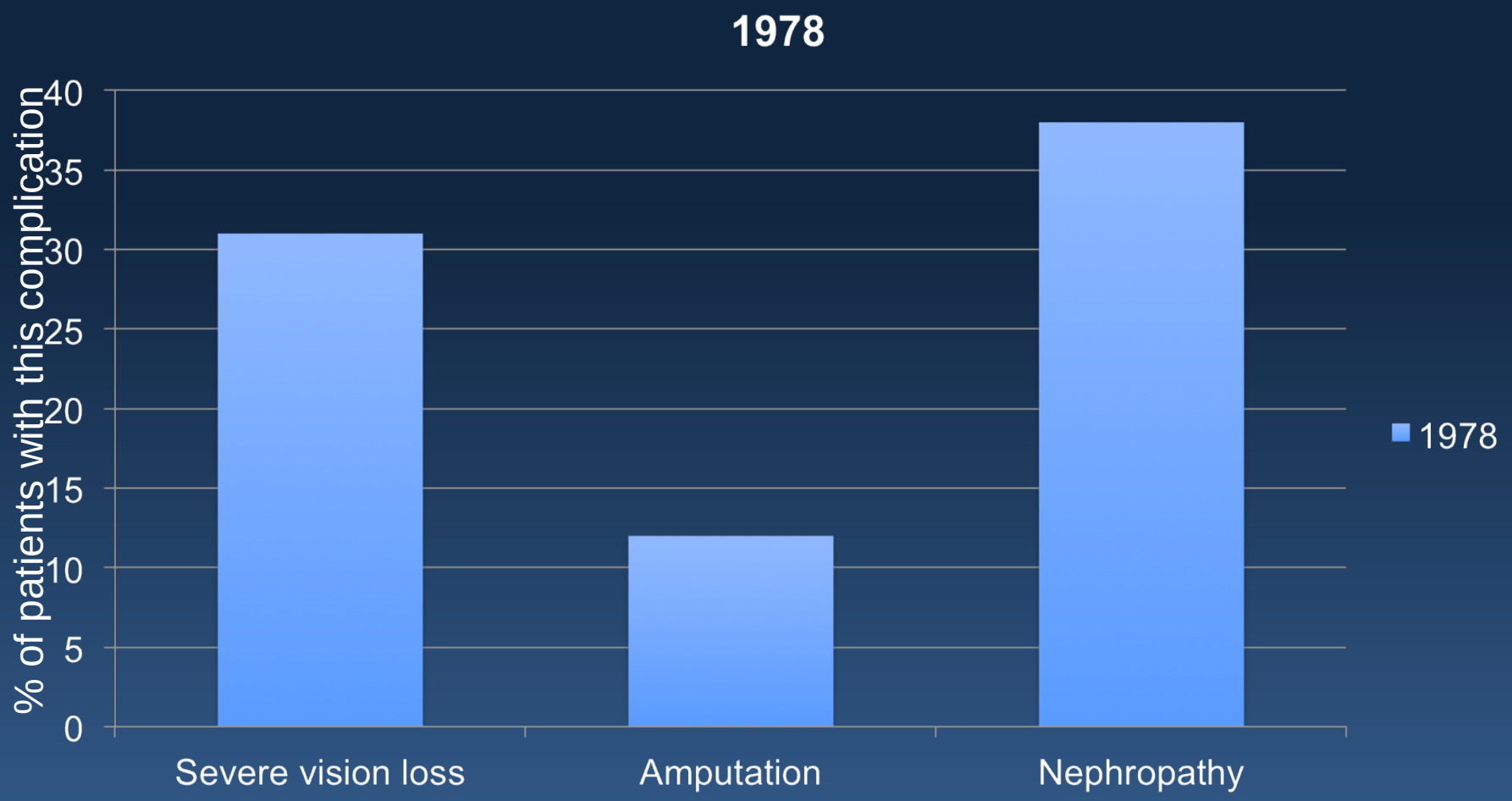
A. False. To a large extent, it is *poorly controlled* diabetes that is the leading cause of adult blindness, amputation and kidney failure.

Well-controlled diabetes is the leading cause of... NOTHING!

Fact Check

- This doesn't mean good care will guarantee that you will not develop complications.
- This does mean: with good care, odds are good you can live a long, healthy life with diabetes.

T1D Complications After 30+ Years



T1D Complications After 30+ Years

Life Expectancy in a Large Cohort of Type 2 Diabetes Patients Treated in Primary Care (ZODIAC-10)

Helen L. Lutgers[1☯], Esther G. Gerrits[2☯*], Wim J. Sluiter[3], Lielith J. Ubink-Veltmaat[4], Gijs W. D. Landman[2], Thera P. Links[3,5], Reinold O. B. Gans[1,5], Andries J. Smit[1,5], Henk J. G. Bilo[1,2,5]

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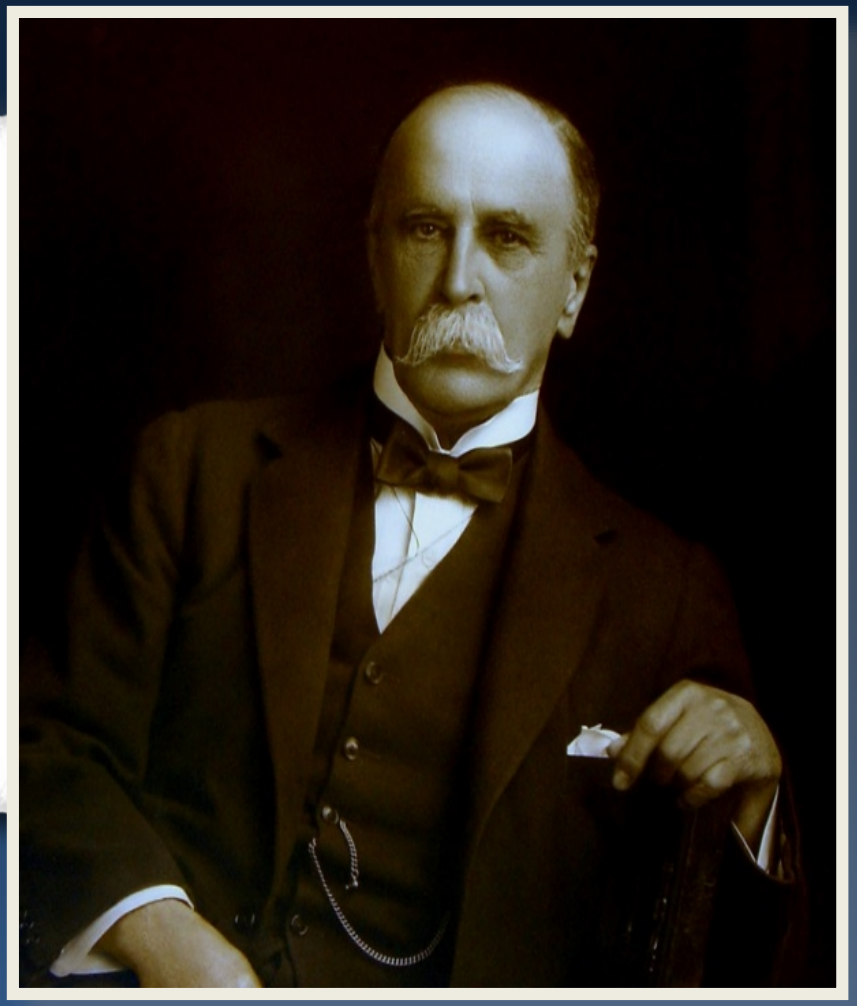
Conclusions: "This study shows a normal life expectancy in a cohort of subjects with type 2 diabetes patients in primary care when compared to the general population."

Diabetes and Your Health

“To live a long and healthy life, develop a chronic disease and take care of it.”

- Sir William Osler



Effective HCP Behavioral Strategies

Table 2. Behavior Change Strategies Reported by Top- and Bottom-Performing Clinicians

Strategy	Clinicians Reporting Strategy, No.	
	Top-Performing Clinicians (n = 10)	Bottom-Performing Clinicians (n = 10)
Used mainly by top-performing group		
Emphasizing patient ownership	8	3
Partnering with patients	9	3
Identifying small steps	10	3
Scheduling frequent follow-up visits	7	3
Showing caring	5	1
Used by both groups		
Reliance on team supports	10	7
Used mainly by bottom-performing group		
Describing consequences of bad health behaviors	2	8

Greene et al, 2016

D. Address Discouragement

- Perceived treatment efficacy
  - Help people to see that their actions can make a positive, tangible difference

Paired Testing: Sam's Story

- Age 42, married, school teacher
- T2D 6 yrs, BMI 33, last A1C 7.9%
- Steady weight gain since dx
- Used to be very active, but quit sports 5 years due to injury
- No longer checks BGs due to "consistently high readings"
- Takes glargine, 80 units QD
- Was encouraged to begin walking, but refuses ("won't help").

Sam's Exercise Experiment

Daily walk (45 minutes)

7 consecutive days: Measure BG right before and after walk

Day	Pre-Exercise	Post-Exercise	BG Change
1	129 mg/dL	101 mg/dL	-28 mg/dL
2	194 mg/dL	153 mg/dL	-41 mg/dL
3	157 mg/dL	94 mg/dL	-63 mg/dL
4	141 mg/dL	108 mg/dL	-33 mg/dL
5	152 mg/dL	127 mg/dL	-25 mg/dL
6	130 mg/dL	98 mg/dL	-32 mg/dL
7	124 mg/dL	102 mg/dL	-22 mg/dL

Average BG change: -35 mg/dL

“I wonder how breakfast affects me.”

“I wonder why I’m often so tired in the evening.”

“I wonder which type of beer would raise my BG’s the least.”

E. Address Medication Concerns

A Diabetes Quiz

ROY takes 2 different diabetes pills and insulin, and his last A1C is 6.8%. SAM hasn't been prescribed any diabetes pills, and his last A1C was 9.1%. Both patients have had diabetes for the same length of time.

Who is doing <u>better</u> with his diabetes?

A. ROY. How healthy you are, and your risk of complications, is not determined by the type of treatment or how many pills you take. It is your metabolic results that matter.

Even if you are not taking pills or insulin, high blood sugars will likely lead to future problems.

Five Medication "Secrets"

1. Big bang. Taking your meds is one of the most powerful things you can do to improve your health
2. Working silently. Your meds are working even if you can't feel it
3. Balancing the claims. There are *always* pro's and con's; the con's are probably not as big as you think.
4. No blame. Needing more meds isn't your fault
5. Not a health metric. More meds don't mean you're sicker, fewer meds don't mean you're healthier


PROS
CONS

In Summary

- Making the invisible visible
  - A1C awareness

In Summary

- Making the invisible visible
- Stay in touch
  - More frequent touch points

In Summary

- Making the invisible visible
- Stay in touch
- Address hopelessness
  - Share the good news

In Summary

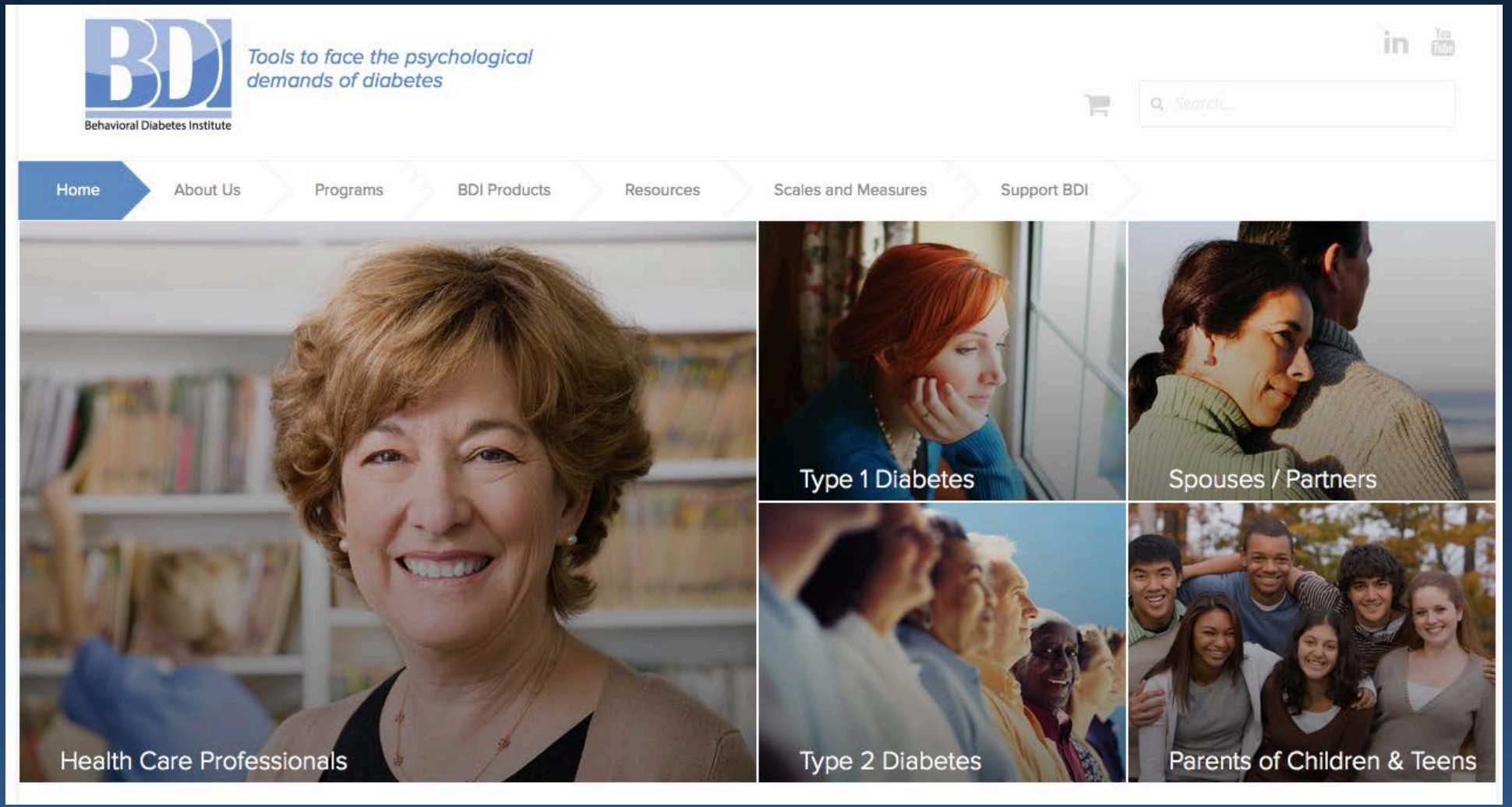
- Making the invisible visible
- Stay in touch
- Address hopelessness
- Address discouragement
  - Perceived treatment efficacy

In Summary

- Making the invisible visible
- Stay in touch
- Address hopelessness
- Address discouragement
- Address medication concerns
  - Discuss the pro's and con's

One Step at a Time

Thanks for Listening



www.behavioraldiabetes.org