Patient Engagement:
The Dilemma of Poor Adherence to Blood Pressure Medications

William H. Polonsky, PhD, CDE

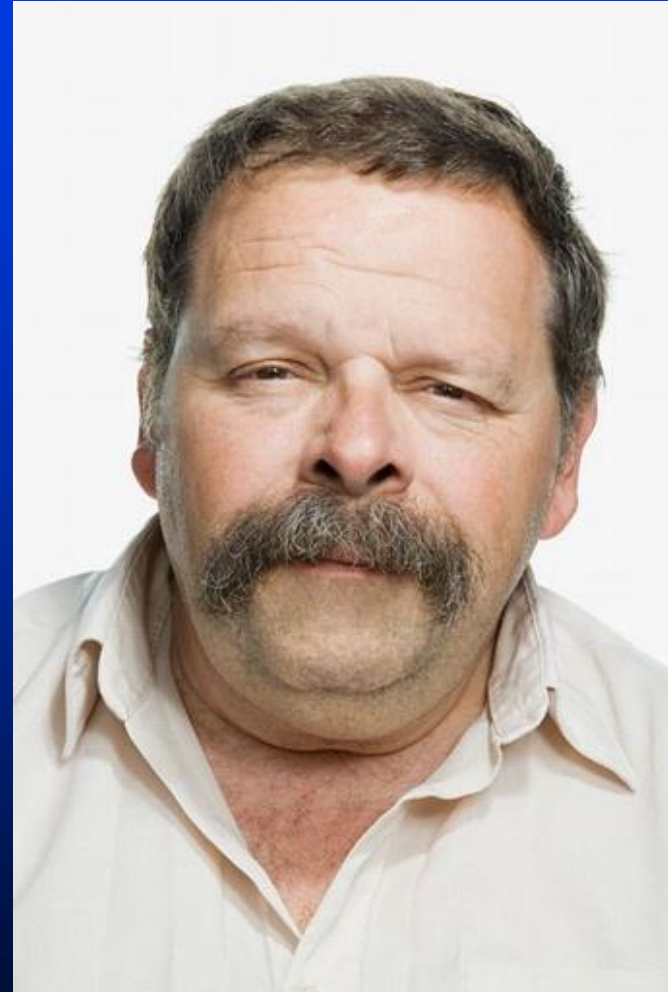May 15, 2014

whp@behavioraldiabetes.org

Mr. Reynolds

- **Age 59, divorced, self-employed CPA**
- **T2D 12 yrs, BMI 34, last A1C 8.8%, last BP 150/95**
- **Admits that he often "forgets" his medications; sees no reason to worry about this**
- **Rarely checks BP or BGs ("no point to it")**
- **Knows he is at risk, but "I have more pressing things to worry about"**

HCP Attributions Regarding Problem Patients

HCP top 5 complaints about patients:

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. Their illness is 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

Patient Perspectives

Qualitative research review, 16 countries

- A large proportion thought hypertension was principally caused by stress and produced symptoms, e.g., headache, dizziness, sweating.
- Pts widely intentionally reduced or stopped treatment without consulting their doctor.
- Pts commonly perceived that BP improved when symptoms abated or when they were not stressed, and that treatment was not needed at these times.

Patient Perspectives

- **Pts disliked treatment and its side effects and feared addiction.**

- **External factors contributing to poor adherence included: no time to take the drugs or to see the doctor; having insufficient money to pay for treatment; the cost of appointments and healthy food; a lack of health insurance; and forgetfulness.**

- **Most findings were consistent across countries and ethnic groups.**

Marshall et al, 2012

Interventions

- **Reducing or eliminating co-pays**
- **Simplifying medication regimens**
- **And so many more, including: "combinations of more convenient care, information, reminders, self-monitoring, reinforcement, counseling, family therapy, psychological therapy, crisis intervention, telephone follow-up, and supportive care."**

Haynes et al, 2008

Meta-Analysis of RCTs to Improve Medication Adherence

- **69 RCT's, multiple chronic illness conditions**

- **Most intervention have been shown to enhance adherence, but:**

- ***"Even the most effective interventions did not lead to large improvements in adherence and treatment outcomes."***

Haynes et al, 2008

Motivation in Chronic Medical Illness

- **Almost no one is unmotivated to live a long and healthy life.**

- **The problem:**
  - *Obstacles to self-care often outweigh possible benefits*
  - *The underlying theme of most obstacles: lack of perceived value*

Medication Obstacles

- **Forgetfulness**
- **Depression**
- **Medication costs**
- **Lack of patient-provider trust**
- **Beliefs about their illness and medications**

Forgetfulness

- **Poor environmental support**

  - **Disruption of daily routine**

  - **The chaos of everyday life**

  - **Confusion about what to take and when to take it**

- **A polite way of avoiding more serious concerns**

Depression and Medication Use

Comparing depressed vs nondepressed patients with diabetes:

- **More likely to omit insulin**
- **Twice as likely to be skipping OHAs**
- **Depressed patients evidence 20% fewer days of adequate OHA medication coverage**
- **More likely to be skipping antihypertensive and lipid-lowering medicines**

Polonsky WH, et al. *Diabetes Spectrum*. 2000;13:36-41. (C)
Ciechanowski PS, et al. *Arch Intern Med*. 2000;160:3278-3285. (B)
Kilbourne AM, et al. *Am J Geriatr Psychiatry*. 2005;13:202-210. (B)
Kalsekar ID, et al. *Ann Pharmacother*. 2006;40:605-611. (B)
Lin EH, et al. *Diabetes Care*. 2004;27:2154-2160. (B)

Medication Costs

- **19% cut back on meds in past year due to costs**
- **28% reported forgoing food or other essentials to pay medication costs**
- **Approximately 1/3 do not discuss costs issues with HCP**

Piette JD, et al. *Med Care*. 2004;42:102-109. (B)
Piette JD, et al. *Diabetes Care*. 2004;27:384-391. (B)
Heisler M, et al. *Med Care*. 2004;42:626-634. (B)

Co-pays and Oral Medications (age > 65)
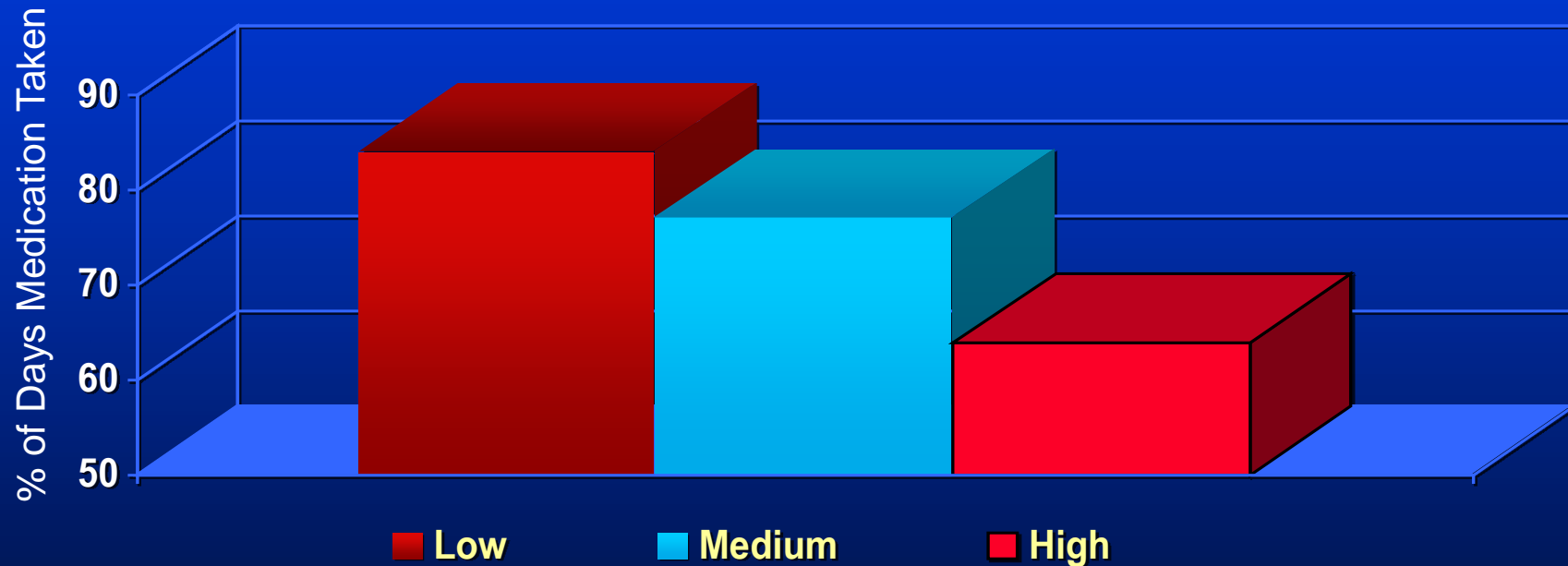
Colombi AM, et al. *J Occup Environ Med*. 2008;50:535-541. (B)

Table 3. Adjusted Odds Ratios for Cost-Related Underuse From a Logistic Model Evaluating the Interaction Between Physician Trust and Out-of-Pocket Medication Costs Along With Other Covariates*

Variable	Monthly Medication Costs		Other Risk Factors
	High-Trust Group	**Low-Trust Group**	
Monthly prescription cost, $			
<51	Referent	0.8 (0.5-1.3)	
51-100	2.4 (0.8-7.4)	3.3† (1.0-11.5)	
>100‡	4.8§ (2.7-8.4)	14.0§ (8.2-23.9)	
Household income, $ (in thousands)			
≥25			Referent
15 to <25			1.3 (0.7-2.5)
10 to <15			1.7† (1.0-2.8)
<10			2.1† (1.1-4.2)
Noncost underuse			
No			Referent
Yes			4.0‖ (2.5-6.5)
Depressive symptoms			
No			Referent
Yes			2.4‖ (1.3-4.5)
Race			
White			Referent
Nonwhite			1.9† (1.1-3.2)

Table 4. Adjusted Odds Ratios for Cost-Related Underuse From a Logistic Model Evaluating the Interaction Between Physician Trust and Patient Income Along With Other Covariates*

Variable	Household Income		Other Risk Factors
	High-Trust Group	Low-Trust Group	
Monthly prescription cost, $			
<51			Referent
51-100			3.3† (1.3-8.4)
>100			9.8‡ (5.3-18.2)
Household income, $ (in thousands)			
≥25	Referent	0.9 (0.4-2.0)	
15 to <25	1.2 (0.5-3.1)	1.0 (0.5-2.0)	
10 to <15§	0.7 (0.2-2.7)	2.6‡ (1.6-4.3)	
<10§	0.6 (0.1-3.7)	4.5‖ (1.6-12.7)	
Noncost underuse			
No			Referent
Yes			3.9‡ (2.4-6.4)
Depressive symptoms			
No			Referent
Yes			2.5‖ (1.4-4.5)
Race			
White			Referent
Nonwhite			1.7 (0.9-3.1)

Physician-Patient Relationship

Table 3. Relationship Between Consultation Attributes and Compliance With Medications (the Dependent Variable) in Logistic Regression Analysis (N = 172)

Consultation Variable	Unadjusted OR (95% CI)	Adjusted* OR (95% CI)
Trust in Physician Scale score	1.07 (1.02-1.12)	1.04 (0.99-1.10)
Continuity of care		
UPC Index	0.90 (0.97-1.01)	0.99 (0.97-1.02)
Usual source of care	2.87 (0.86-9.60)	5.98 (1.88-19.03)
Length of care with same doctor	0.94 (0.74-1.19)	0.86 (0.68-1.09)
Importance of seeing same doctor each visit	0.86 (0.56-1.30)	0.80 (0.51-1.25)
Enablement Index	1.03 (0.99-1.08)	1.05 (0.98-1.12)
Physician-patient concordance score	1.21 (1.05-1.39)	1.34 (1.04-1.72)[†]

Kerse et al, 2004

What Does "Trust" Mean?

- To what extent do you think the doctor understands why you came in today?

- How well do you think the doctor understood you today?

- To what extent did you and the doctor agree about the main problem or need today?

- To what extent did you and the doctor agree about what to do about the problem or need?

Medication Obstacles

- **Forgetfulness**
- **Depression**
- **Medication costs**
- **Patient-provider trust**
- **Beliefs about diabetes and medications**

Patients' Medication Beliefs

- **Adherence is better when medication is perceived as worth the effort**
  - Patients must know why they are taking their medications, and how to take them
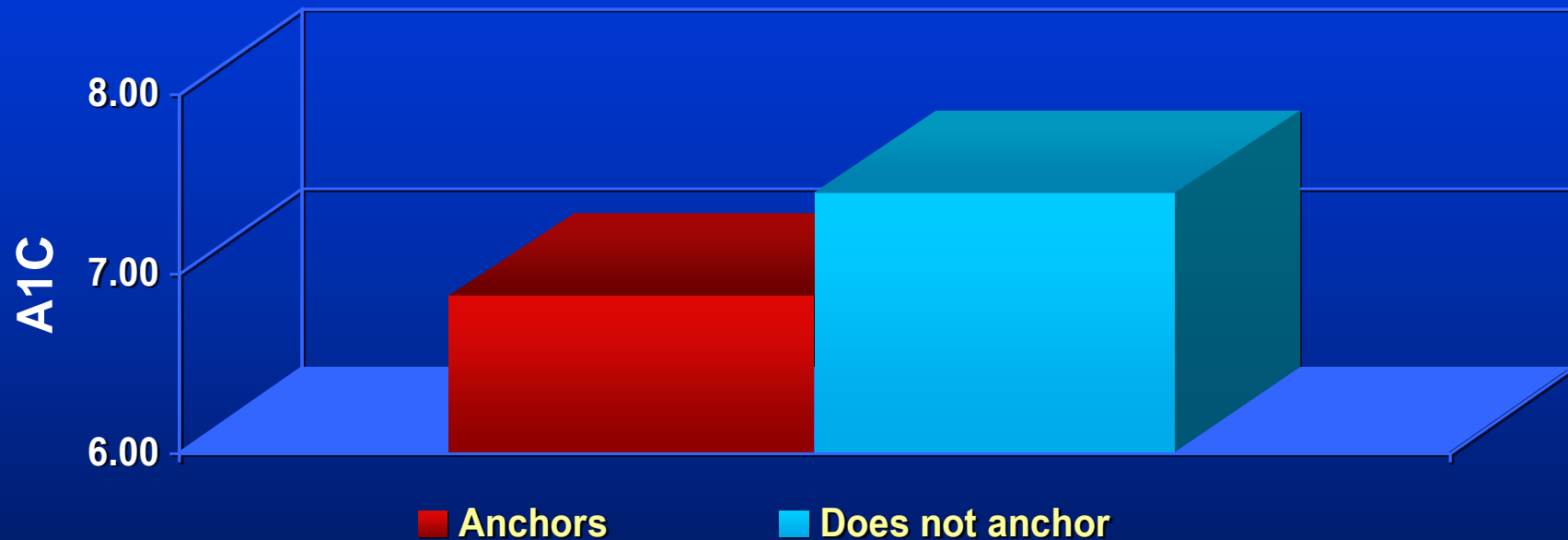- **Perceived gain must outweigh perceived cost**
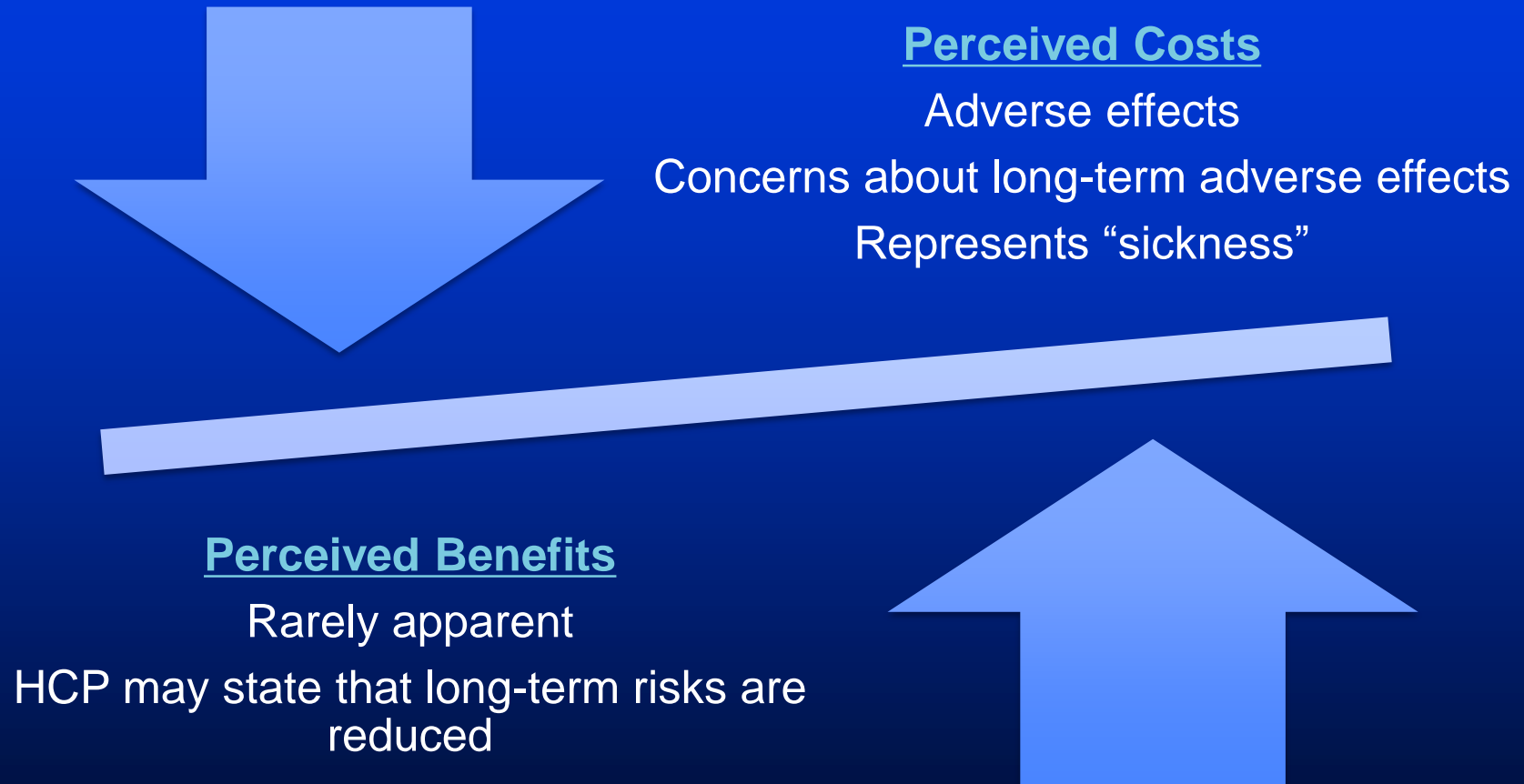
So What Can We Do?

- **Forgetfulness**
  - o **Inquire further. "Aside from forgetting, what else is tough about taking your meds?"**
  - o **Anchoring strategies**

Anchoring Medication to Daily Events

"A daily event (a meal, TV show, bedtime, brushing my teeth) reminds me."

Littenberg B, et al. *BMC Fam Prac*. 2006;7:1. (B)

So What Can We Do?

- **Forgetfulness**

- **Depression**
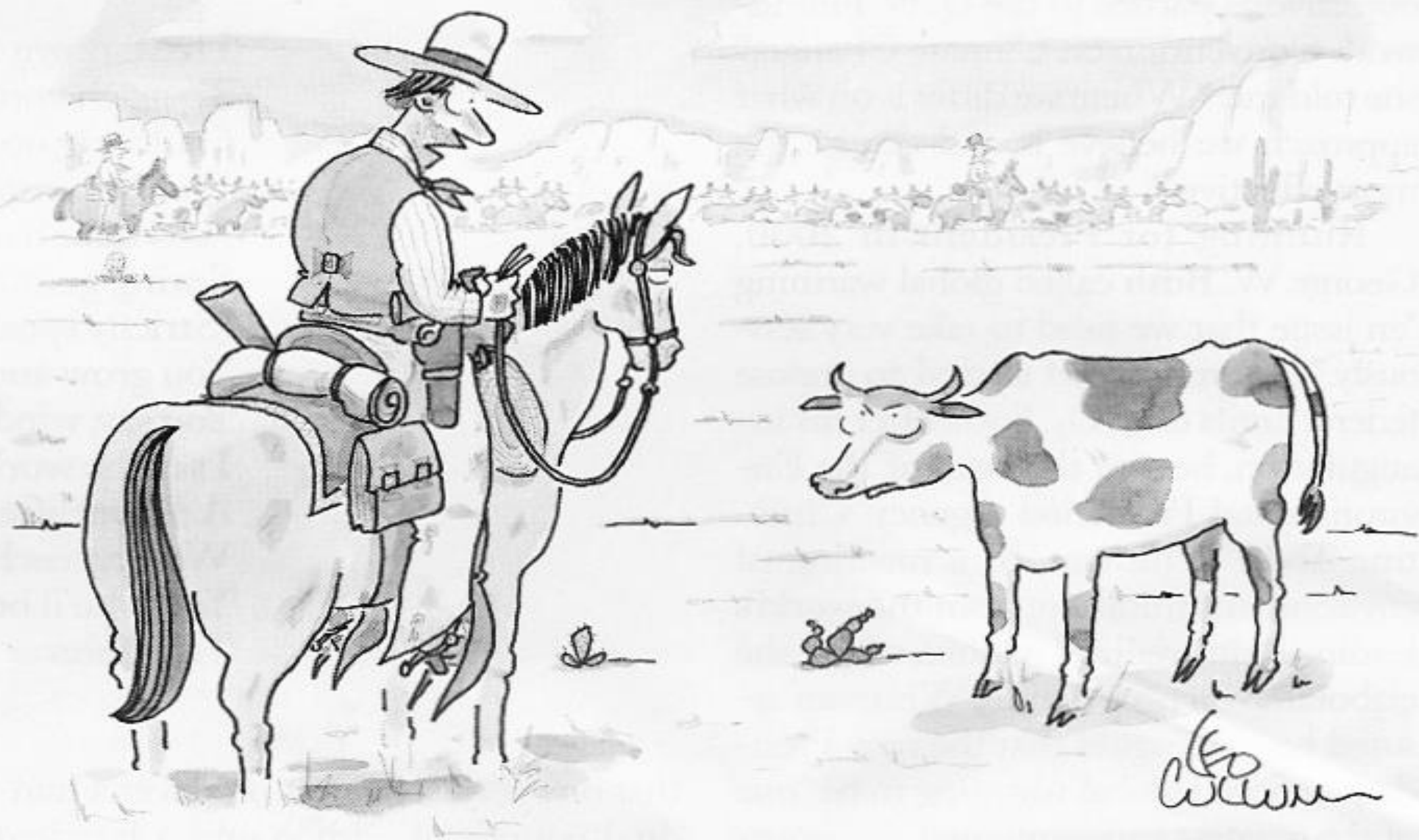 - Assess and treat as needed

So What Can We Do?

- **Forgetfulness**
- **Depression**
- **Medication costs**
  - Ask your patients about costs
  - Consider alternatives

So What Can We Do?

- **Forgetfulness**
- **Depression**
- **Medication costs**
- **Patient-provider trust**
  - **Listen, listen, listen**
  - **Motivational interviewing**

"No one is making you do anything you don't want. I'm just saying we're all headed for Dodge City and we think you should come along."

So What Can We Do?

- **Forgetfulness**
- **Depression**
- **Medication costs**
- **Patient-provider trust**
- **Beliefs about diabetes and medications**

Challenging Harmful Beliefs

- **Out-of-control diabetes can harm you, even if you feel okay**

- **Treatment should not be delayed**

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*	
Lipids	100 or less	*116*		*x*

Challenging Harmful Beliefs

- **Out-of-control diabetes can harm you, even if you feel okay**

- **Treatment should not be delayed**

- **Discuss the critical "medication secrets"**

Four Medication "Secrets"

1. Taking your medications is one of the most powerful things you can do to positively affect your health

2. Your medications are working even if you can't feel it

3. Needing more medication isn't your fault

4. More medication doesn't mean you are sicker, less medication doesn't mean you are healthier

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.

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Ace Inhibitor Lawsuit

With the growing use of ACE inhibitor blood pressure drugs, more and more patients around the country are winding up in emergency rooms suffering from a rare side effect known as angioedema. This condition is similar to hives, except that it causes swelling beneath the skin rather than at the surface. Due to the large number of angioedema cases among ACE inhibitor users, many in the medical community are calling on the U.S. Food & Drug Administration (FDA) to require labels of these drugs to carry a black box warning.

Free ACE Inhibitor Blood Pressure Drug Lawsuit Evaluation: If you or a loved one has suffered a serious injury you feel may have been caused by an ACE inhibitor blood pressure drug, you should contact our law firm immediately. You may be entitled to compensation by filing a suit against the manufacturer of the ACE inhibitor and we can help.

Supplements
March 06, 2013

- Multi-Vitamin (New Chapter Every Woman II): 3 tablets (2 in AM/1 in PM) [*see below for ingredients*]
- Vitamin C (Ester-C): 500 mg each; 2 capsules, 1 in AM/1 in PM
- Last week I changed from Glucosamine (500 mg each) / Chondroitin (333 mg each): 2 capsules, 1 in AM,
  "Joint Formula" from Mercola.com: 1 capsule in AM [*see below for ingredients*]
- Fish Oil (Garden of Life – Oceans 3): 2 softgels/day; 1 in AM/1 in PM [*see below for ingredients*]
- Red Yeast Rice; 600 mg each; 2 capsules, 1 in AM/1 in PM (T, T, S, S[1])
- CoQ10: 60 mg each capsule; 1/day in PM (T, T, S, S[1])
- Ubiquinol: 100 mg each capsule; 1/day in AM
- Potassium (75 mg each) / Magnesium (100 mg each); 1/day
- Calcium (500 mg each) / Magnesium (250 mg each); 1/day
- Vitamin D-3: 400 mg each softgel; 3/day x 5 days
- Vitamin D-3: 2,000 IU each capsule; 1/day x 2 days
- Glutathione: 500 mg each capsule; 1/day
- Astaxanthin: (Mercola.com): 4 mg each; 1/day (T, T, S, S[1]) [*see below for ingredients*]
- Krill Oil: (Mercola.com-women's formula); 1,000 mg/day (T, T, S, S[1]) [*see below for ingredients*]
- Krill Oil: (Mercola.com); 1,000 mg/day (M, W, F[2]) [*see below for ingredients*]
- Probiotics: (Mercola.com); 1 capsule/day [*see below for ingredients*]

[1] *Tuesday, Thursday, Saturday, Sunday*

[2] *Monday, Wednesday, Friday*

The KEY Take Home Message

What we have missed:

- In a significant number of cases, patients avoid or quit medications <u>because they are trying to be healthy.</u>

- Patients and physicians have the same goal (and often the same concerns) in mind, and we must take advantage of that.

Diabetes and Your Health

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

Sir William Osler
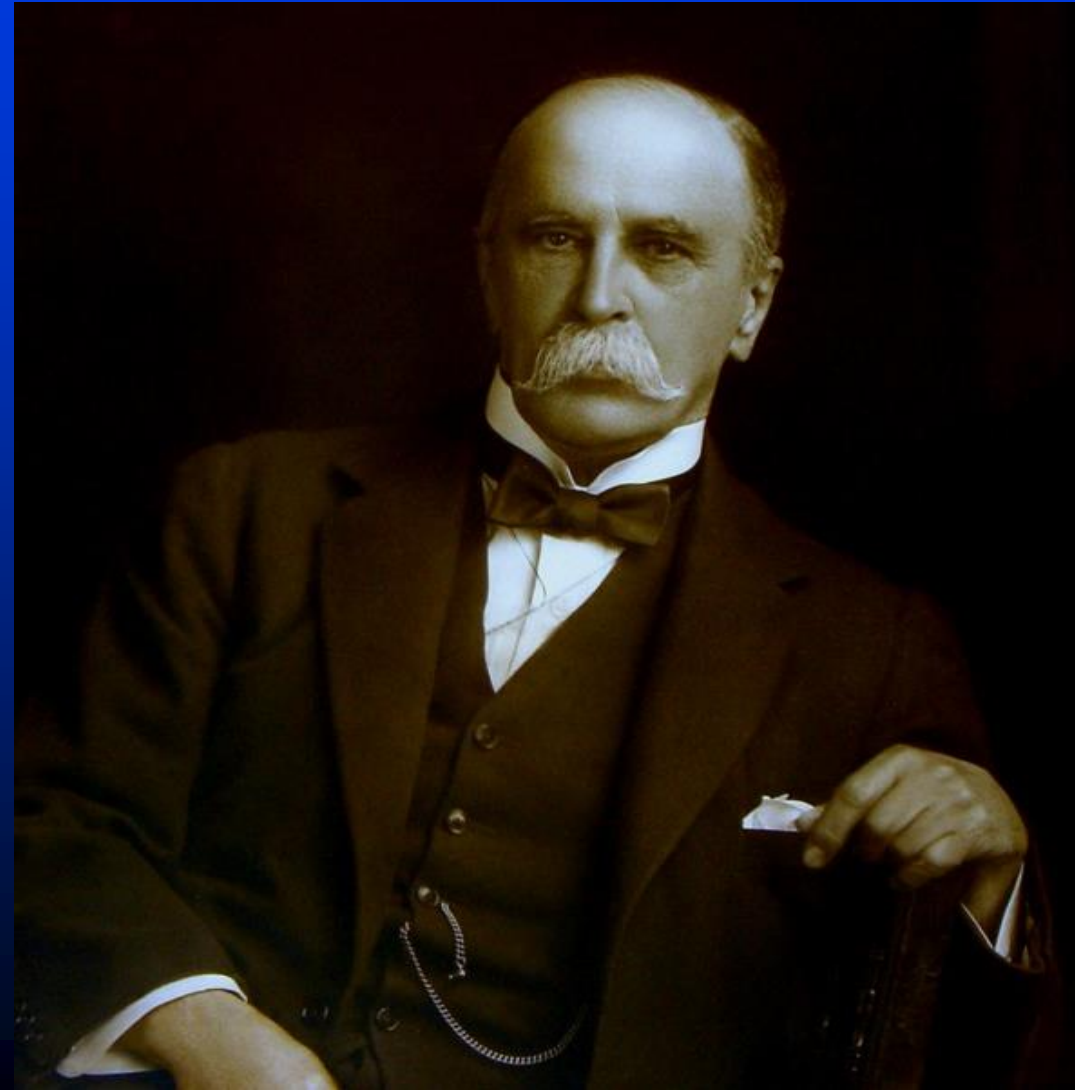
Thanks for Listening!

William H. Polonsky, PhD, CDE

whp@behavioraldiabetes.org