Overcoming Therapeutic Inertia: Clinical Workshop

Los Angeles, CA
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American Diabetes Association®

Overcoming Therapeutic Inertia

Understanding Therapeutic Inertia in 2019: Why should you care?

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Economic Costs of Diabetes in the US in 2017

- ***327 billion were spent in 2017 on diagnosed diabetes.***
  - $237 billion in direct medical costs and $90 billion in reduced productivity

- ***Direct medical costs represent a 26% increase (adj for inflation) since 2012 (***increased prevalence and the increased cost per person affected)

- **More than 300 million work days are lost to the economy due to diabetes**

- **Diabetes resulted in 277,000 premature deaths.**

American Diabetes Association. Diabetes Care. 2018 May;41(5):917-928.

Economic Costs of Diabetes in the US in 2017

- Medications directly used to treat diabetes = $31 billion, $15 billion of which is for insulin.
    - Increased by 45% over 5 years after adjusting for inflation

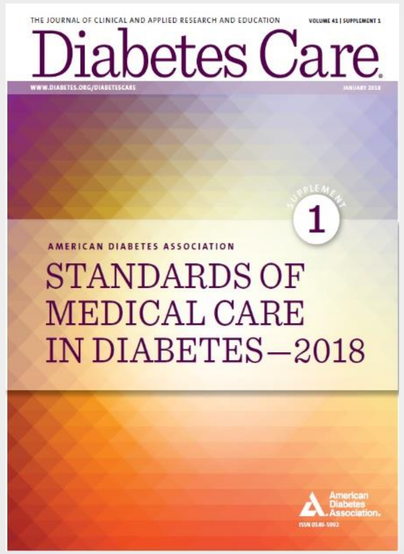
- ***1 in every 4 health care dollars*** spent (24 percent) was for the care of people with diabetes

- ***1 of every 7 health care dollars*** (14 percent) can be attributed directly to care for diabetes.

American Diabetes Association. Diabetes Care. 2018 May;41(5):917-928.

Therapeutic Advances Over Past 20 Years

ADA Standards of Care
1989



Insulin

SFU

Metformin

αGlucosidase inhibitor

Rapid-acting insulin

Basal insulin

TZD

Meglitinide

GLP-1R agonist

Pramlintide

DPP-4 inhibitor

Bromocriptine

SGLT-2 Inhibitor

1920 1960 1970 1980 1990 2000 2010-2014

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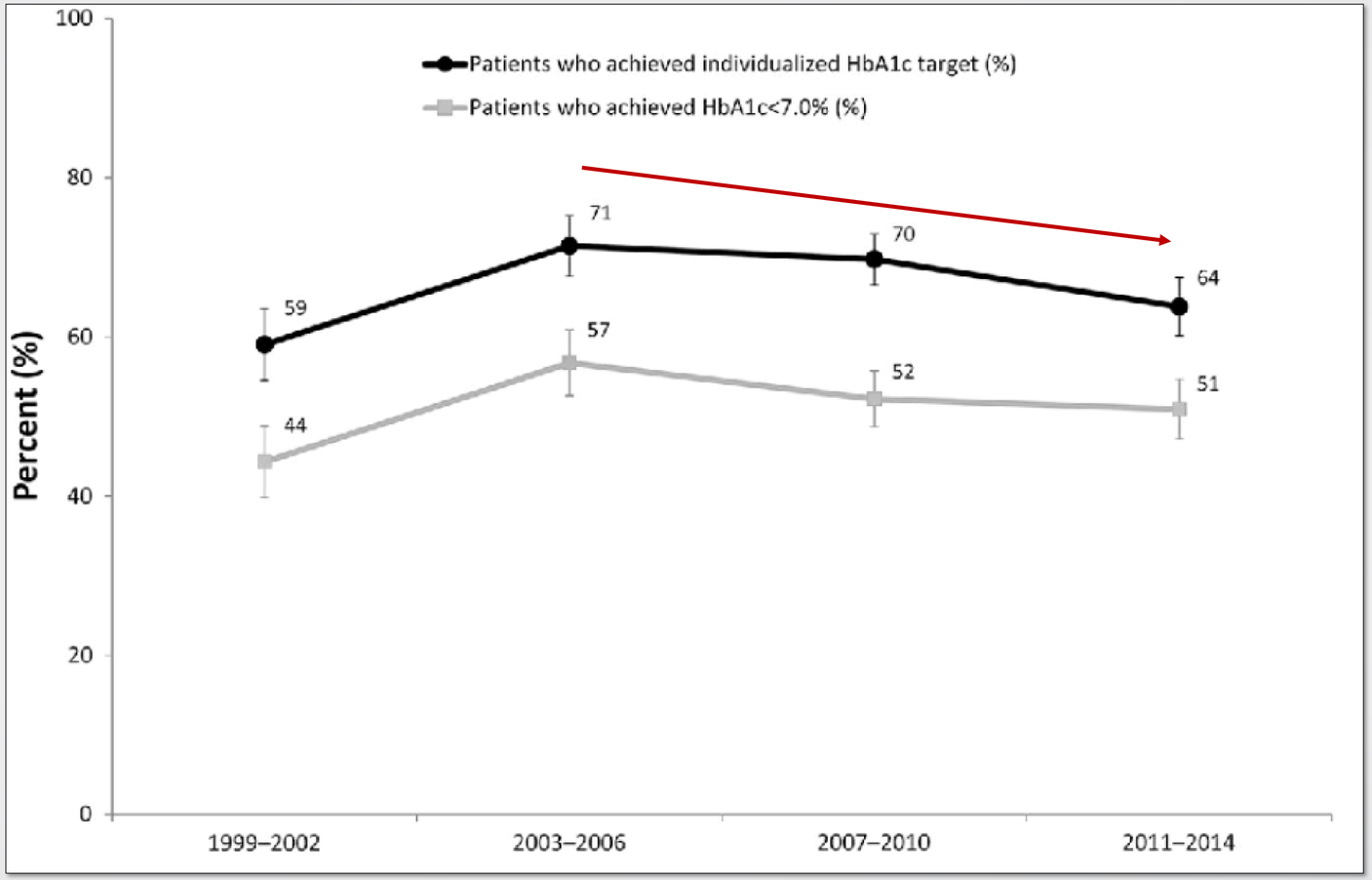
Despite increasing number of new diabetes medications and technologies …

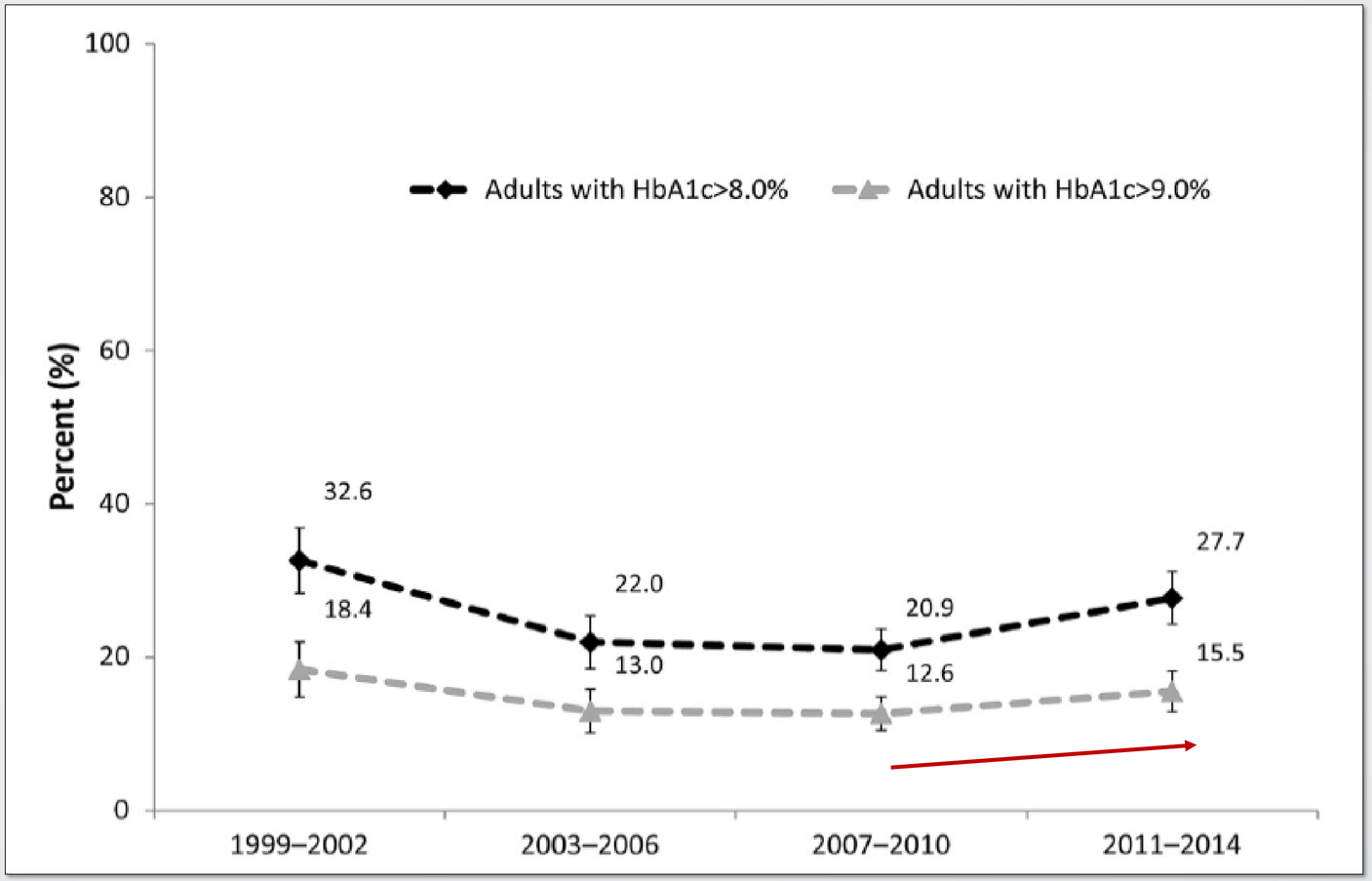
- Achievement of individualized targets declined from 69.8% to **63.8%**



Carls G . Huynh J . Tuttle *et al*. Achievement of Glycated Hemoglobin Goals in the US Remains Unchanged Through 2014. Diabetes Ther 2017;8:863–873

Despite increasing number of new diabetes medications and technologies …

- The percentage with HbA1c >9.0% increased from 12.6% to **15.5%**



Carls G . Huynh J . Tuttle *et al*. Achievement of Glycated Hemoglobin Goals in the US Remains Unchanged Through 2014. Diabetes Ther 2017;8:863–873

Disruption is Needed to Improve Care Quality in Diabetes

Type 2 Diabetes Trends in the U.S. 2006-2013

DPP-4 and GLP-1 Rx approved

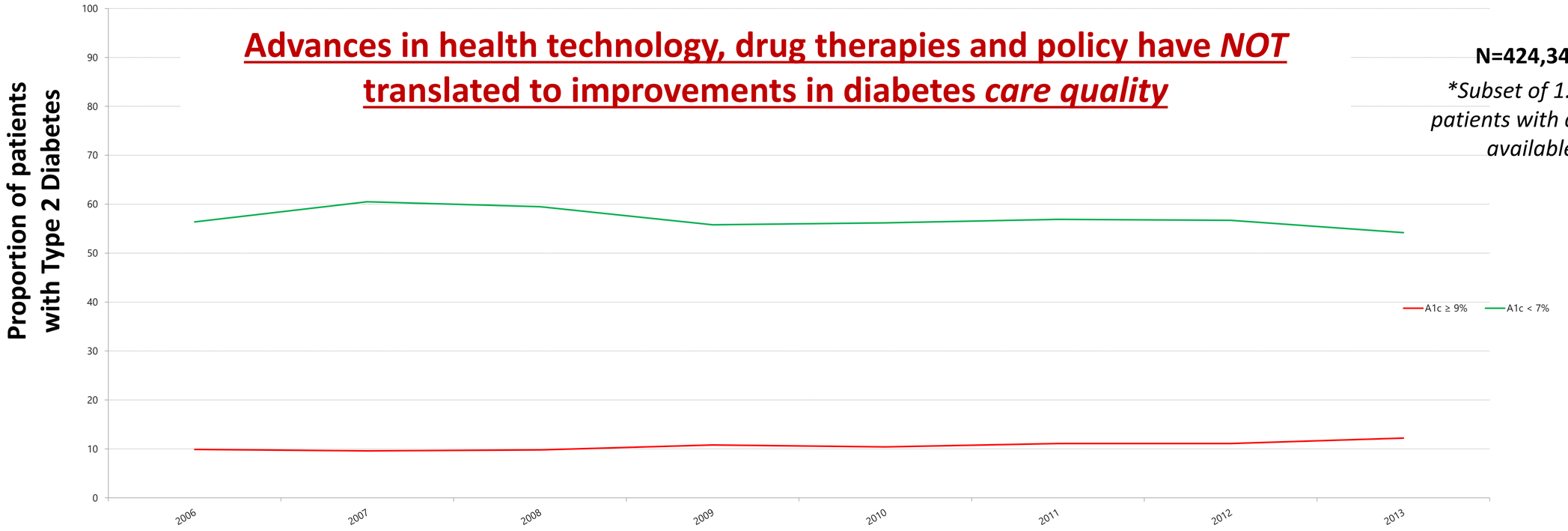
Increased adoption of EHRs, HITECH Act, iPhone and apps introduced

Affordable Care Act becomes law, proliferation of "personal tech"

Meaningful Use Implementation, PCMH, ACO formations

SGLT-2 inhibitor Rx approved

Advances in health technology, drug therapies and policy have *NOT* translated to improvements in diabetes *care quality*



N=424,348*

**Subset of 1.66M patients with an A1c available*

Adapted from: Lipska KJ, Yao X, Herrin J, et al. Trends in drug utilization, glycemic control, and rates of severe hypoglycemia, 2006–2013 [published online September 22, 2016]. *Diabetes Care*. doi:10.2337/dc16-0985.

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What's wrong with this picture?

- Decline in % of patients at HbA1c <7%
- At best, only about 50% of patients at Goal
- Increase in % of patients with very poor control
- Unacceptable level of morbidity and mortality
- Diabetes-related costs to society are tremendous

ALL THIS DESPITE MORE THAN 40 NEW T2D TREATMENT OPTIONS APPROVED SINCE 2005

The root of the problem ...

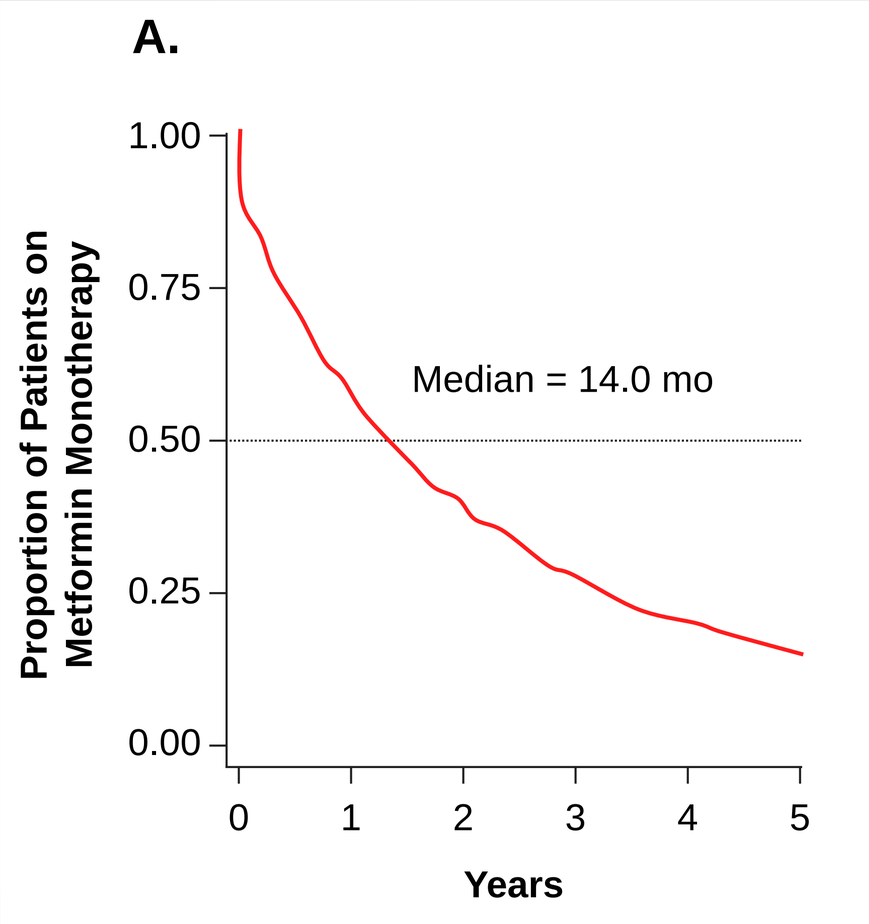
Therapeutic Inertia

Therapeutic Inertia: Rational and Clinical Relevance

- The failure to establish appropriate targets and escalate treatment to achieve treatment goals
- Responsible for substantial, preventable complications of diabetes with the associated excess in direct and indirect health care costs

Treatment Intensification In Patients With Type 2 Diabetes Who Failed Metformin Monotherapy

Time To Treatment Intensification For All Patients (A),



Fu et al. *Diabetes, Obesity and Metabolism*; 2011;13: 765–769

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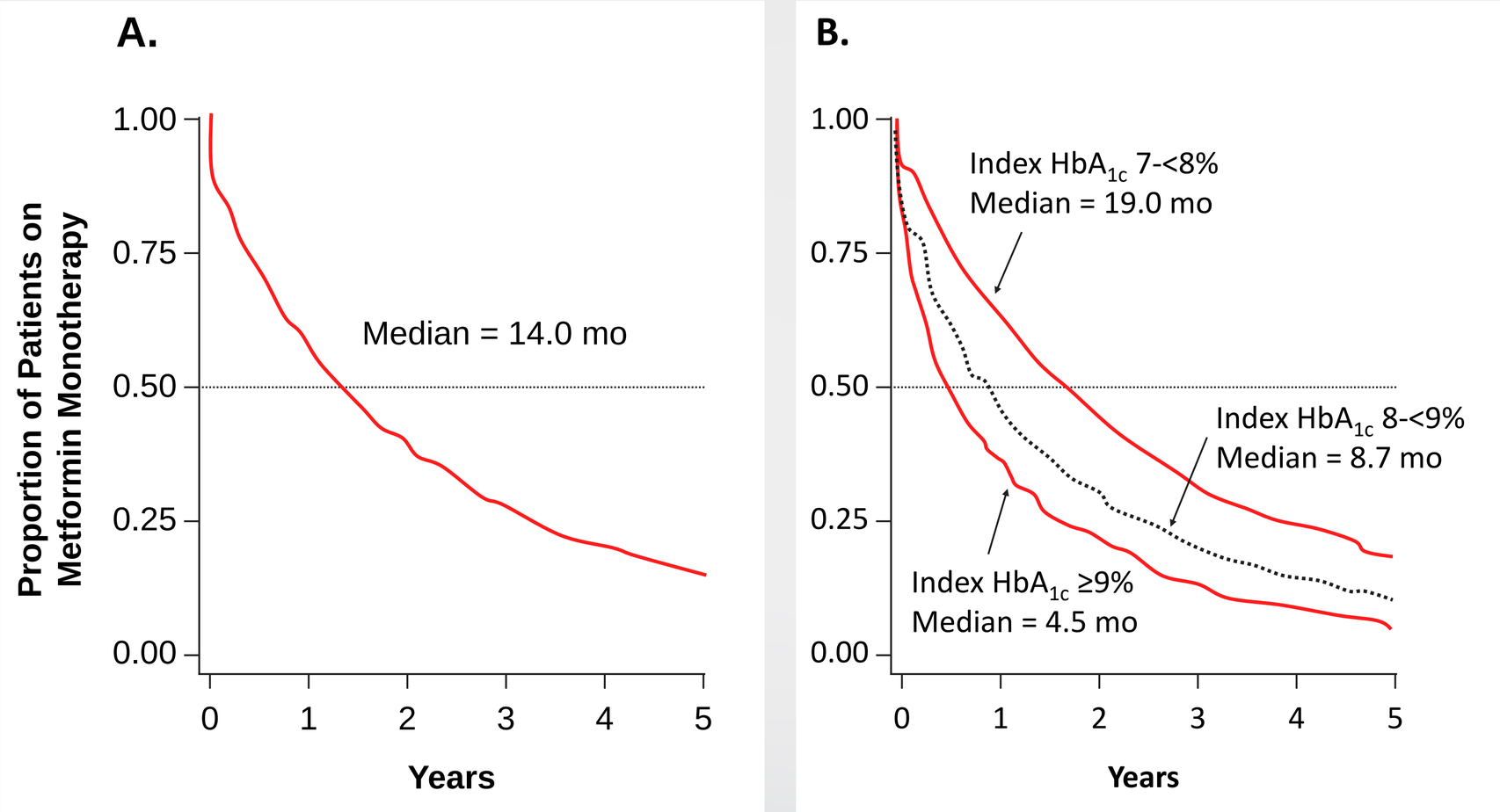
Treatment Intensification In Patients With Type 2 Diabetes Who Failed Metformin Monotherapy

Time To Treatment Intensification For All Patients (A), By Index HbA_{1c} Level (B),



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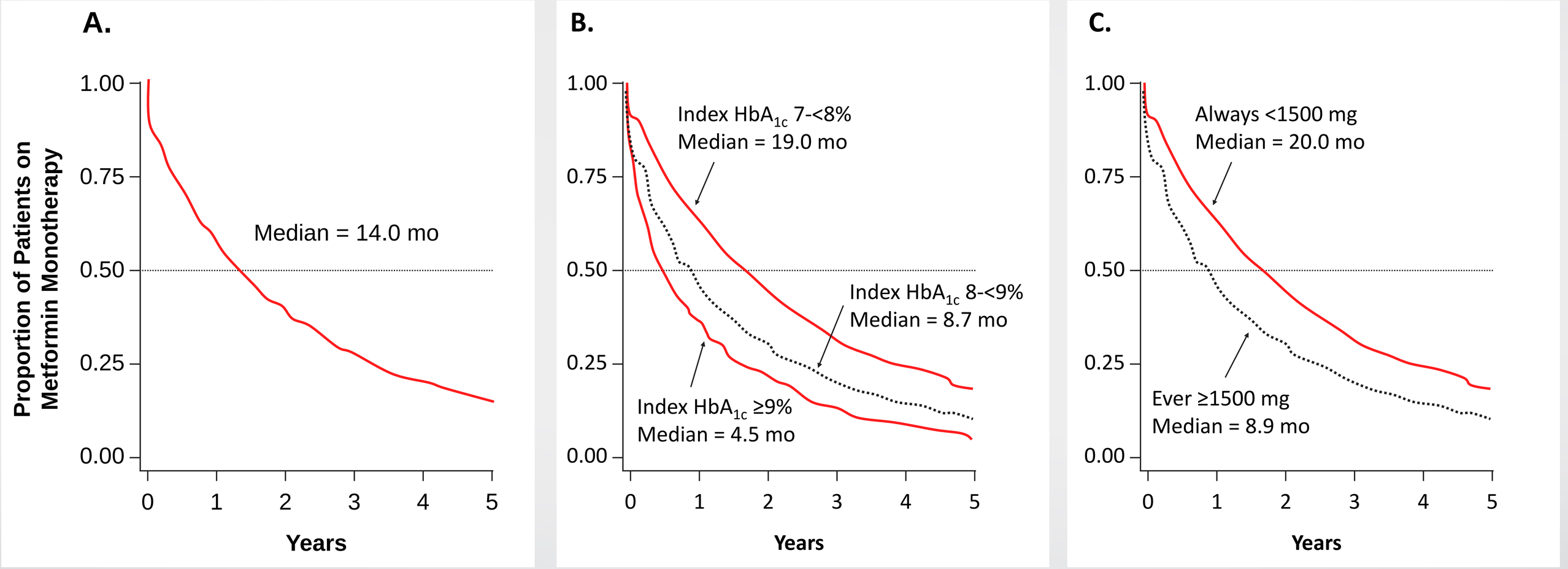
Treatment Intensification In Patients With Type 2 Diabetes Who Failed Metformin Monotherapy

Time To Treatment Intensification For All Patients (A), By Index HbA_{1c} Level (B), By Metformin Daily Dose (C)



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Our view ...

- Although therapeutic inertia impacts all populations, targeting individuals with **type 2 diabetes** is our first priority

- The causes of clinical inertia are multifactorial, with contributory elements from five stakeholder groups:
  - People with diabetes
  - Clinicians and other healthcare providers
  - Healthcare systems
  - Payors
  - Industry

Promotors of Therapeutic Inertia Often Cited…

Clinician-Related

- Insufficient time
- Failure to set clear goals
- Failure to initiate treatment
- Failure to titrate treatment to achieve goals
- Failure to identify and manage comorbidities (e.g. depression)
- Patient ‘highjacks’ the clinical encounter
- Reactive rather than proactive care
- Underestimation of patient's need

Patient-Related

- Denial of having the disease
- Denial that the disease is serious
- Low health literacy
- High cost of medication
- Too many medications
- Medication side-effects
- Poor communication between physician and patient
- Lack of trust in physician
- SDOH, Depression or substance abuse
- Lifestyle factors
- Absence of symptoms

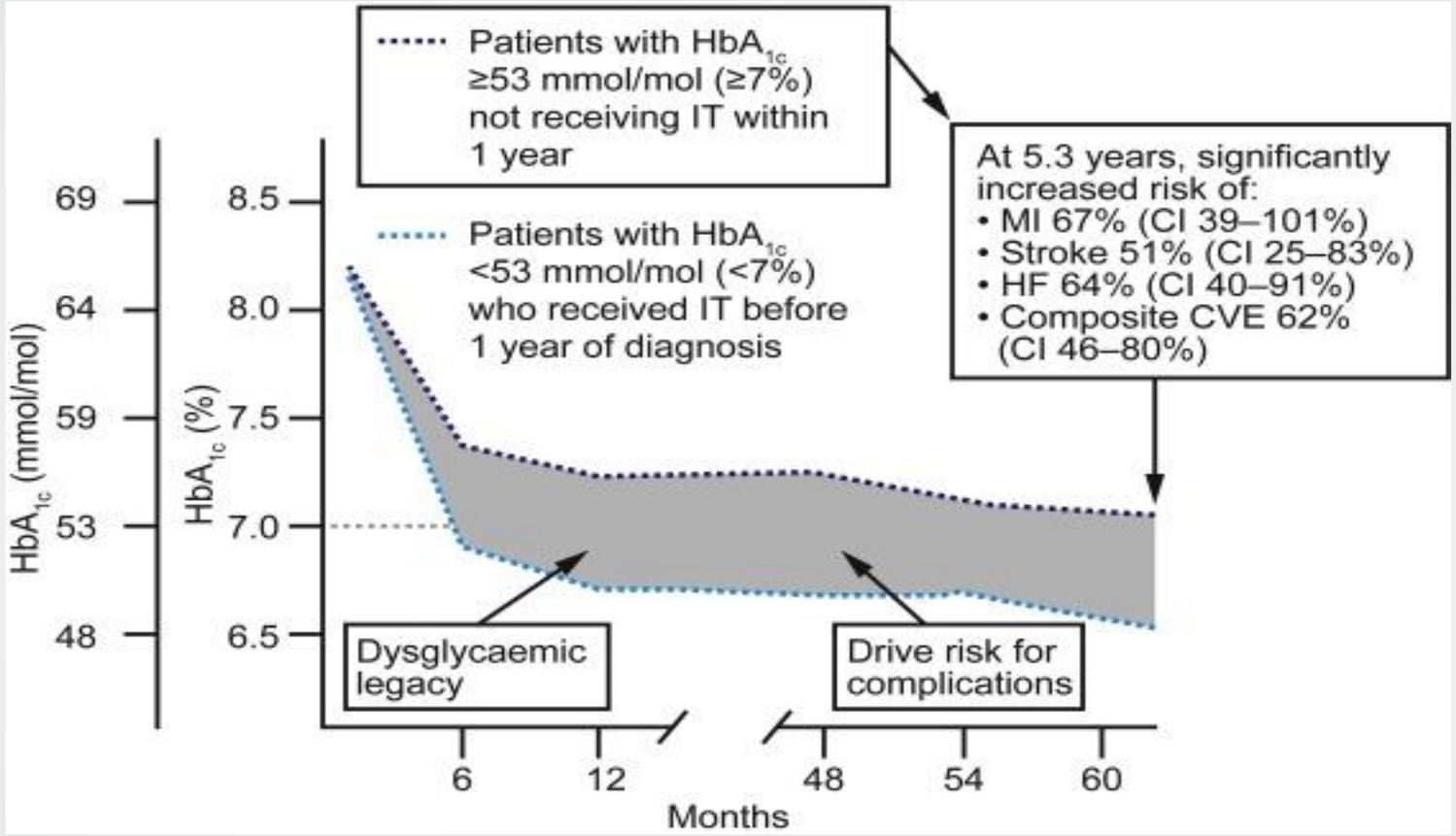
Healthcare System/Practice –related

- No clinical guidelines
- No disease registry
- No visit planning
- No active outreach to patients
- No decision support
- No team approach to care
- Poor communication between physician and staff

Adapted from: G Reach, V Pechtner, et al.; Clinical inertia and its impact on treatment intensification in people with type 2 diabetes mellitus; Diabetes & Metabolism Vol 43, Issue 6, Dec. 2017, 501-511

Impact of Clinical Inertia on Risk of CVD

Poor glycemic control combined with delayed treatment intensification significantly increases CV risk in patients with T2D



A 1-year delay in treatment intensification in uncontrolled patients (A1c >7%) without previous CVD significantly increased the risk of MI, HF, stroke, and a composite endpoint of CV events

The risk of CVD is shown for patients with A1c consistently >7% in the 2 years following diagnosis for whom treatment intensification is delayed by ≥1 year vs that of patients with A1c consistently <7% in the same period. Illustration based on data from Paul SK, et al. *Cardiovasc Diabetol*. 2015;14:100. CI: confidence interval; CV: cardiovascular; CVD: cardiovascular disease; HF: heart failure; IT: intensification of treatment; MI: myocardial infarction; T2D: type 2 diabetes.

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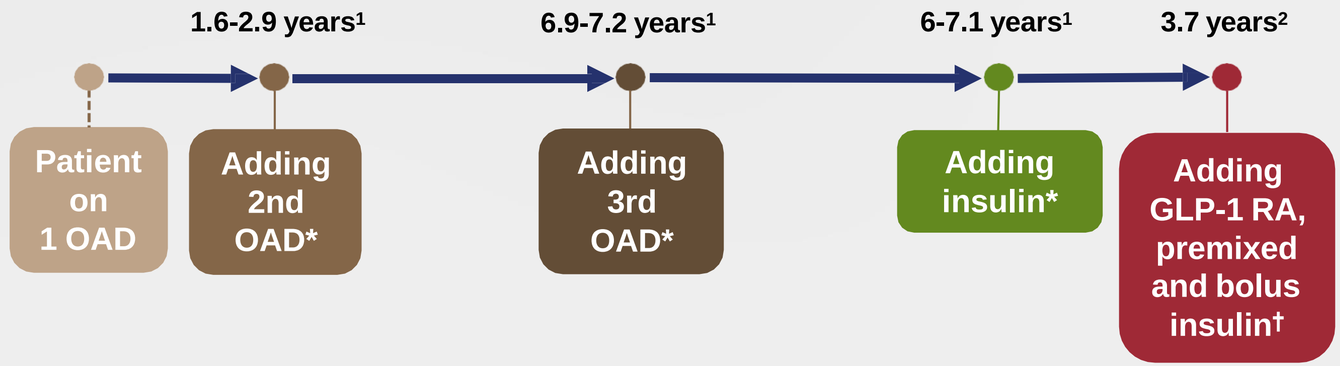
Clinical Inertia Plays an Important Role in Delaying Intensification of Diabetes Therapy

Substantial inertia exists at each sequential intensification step



*From time when A1c was ≥7.0%, ≥7.5%, or ≥8.0%; †From time when A1c was ≥7.5%.
GLP-1 RA: glucagon-like peptide-1 receptor agonist; OAD: oral antidiabetic drug.

Slide courtesy of Steve Edelman, MD.

1. Khunti K, et al. *Diabetes Care.* 2013;36:3411-3417. **2**. Khunti K, et al. *Diabetes Obes Metab.* 2016;18:401-409.

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What's in a name?

- Compliance
- Adherence
- Concordance
- Persistence

Elements of multifaceted approaches to improve medication adherence

Positive relationships and quality of the clinical environment
Ongoing reinforcement, motivation, and support at every step in the health care system
Simplifying dosage regimens
Involving patients in the decision-making process and setting goals that are later reviewed with the patient
Education about the medication, its benefits, side-effect management, duration of therapy, and what a patient can expect
Follow-up care and reminders
Rewards for achieving goals
Social support, including family members, when possible
Self-management training

From Oyekan E, Nimalasuriya A, Martin J, Scott R, Dudl RJ, Green K. The B-SMART appropriate medication-use process: a guide for clinicians to help patients–part 1: barriers, solutions, and motivation. The Permanente Journal. 2009;13(1:62-69. Reprinted with permission from The Permanente Press, www.thepermanentejournal.org, copyright 2009.

What else is important to know about therapeutic inertia?

- Early tight control leads to longer term maintenance of glycemic control.[1] – A legacy effect.
- Therapeutic inertia leads to a reduced likelihood of achieving target levels later in the disease trajectory.[2]
- Early intensification of treatment, in appropriate patients, is associated with a shorter time to subsequent glycemic control.[3]
- Therapeutic inertia has been associated with a reduced quality of life for the patient, along with increased risks of morbidity and mortality.

1. M Abdul-Ghani, C Puckett, *et al*. Initial combination therapy with metformin, pioglitazone and exenatide is more effective than sequential add-on therapy in subjects with new-onset diabetes. Results from the efficacy and durability of initial combination therapy for type 2 diabetes (EDICT): a randomized trial. *Diabetes Obes Metab* 2015; 17: 268–275.

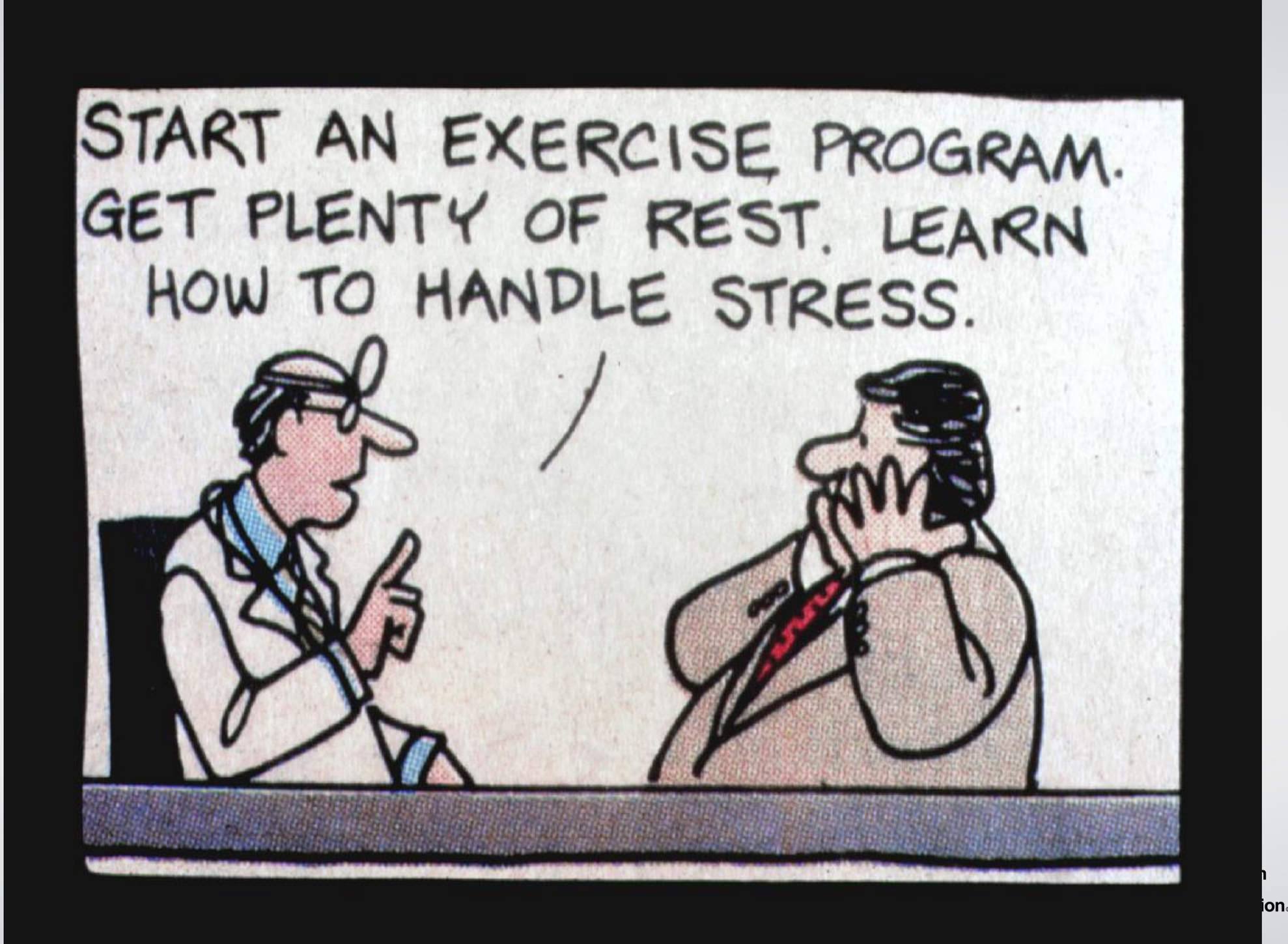
2. D Mauricio, L Meneghini, *et al*. Change in insulin dose and HbA1c by geographical region—results from the diabetes unmet need with basal insulin evaluation (DUNE) Study. *Diabetes* 2018; 67(Suppl. 1). DOI: 10.2337/db18-1037-P.

3. U Desai, NY Kirson *et al*. Time to treatment intensification after monotherapy failure and its association with subsequent glycemic control among 93,515 patients with type 2 diabetes. *Diabetes Care* 2018; 41: 2096–2104.


YOUR LIFESTYLE IS DESTROYING YOU.


THE BEST WAY TO ACHIEVE GOOD HEALTH IS TO TAKE CARE OF YOURSELF.


YOU SHOULD CHANGE YOUR EATING HABITS, AND STOP SMOKING AND DRINKING.


START AN EXERCISE PROGRAM.
GET PLENTY OF REST. LEARN
HOW TO HANDLE STRESS.


YOU'RE RIGHT, DOC. THANKS!


MAN! I'VE GOT TO FIND ANOTHER DOCTOR!
4-24

What can you expect from this workshop?

- Practical advice from real-world settings
- Case-based presentations that will provide ideas for:
  - Optimizing your practice workflow
  - Addressing communication barriers
  - Dealing with patient self-care/self-management resistance
- Opportunities to discuss and share both your biggest challenges and solutions that work for you
- Leave with Ideas you can use in your practice right now that could make the measurable difference in reducing TI in your practice.

Today is about…

- Solutions
- Discussion
- Sharing
- Patients

It is not about…

- Finger-pointing
- Blame
- Ego
- Self-interest

We Value Your Partnership!

Together, we can do so much toward our unified goals to improve the lives of those with diabetes!

Words to live by!

- *“Coming together is a beginning. Keeping together is progress. Working together is success."* --Henry Ford

- *"The strength of the team is each individual member. The strength of each member is the team."* --Phil Jackson

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