Overcoming Therapeutic Inertia: Clinical Workshop

Los Angeles, CA
October 17, 2019
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.

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.

Therapeutic Advances Over Past 20 Years

ADA Standards of Care 1989

- Insulin
- SFU
- Metformin
- TZD
- Meglitinide
- DPP-4 inhibitor
- GLP-1R agonist
- Pramlintide
- SGLT-2 Inhibitor
- αGlucosidase inhibitor
- Rapid-acting insulin
- Basal insulin

Timeline:
- 1920
- 1960
- 1970
- 1980
- 1990
- 2000
- 2014
Despite increasing number of new diabetes medications and technologies …

- Achievement of individualized targets declined from 69.8% to 63.8%
Despite increasing number of new diabetes medications and technologies …

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

Disruption is Needed to Improve Care Quality in Diabetes
Type 2 Diabetes Trends in the U.S. 2006-2013

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

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),

Median = 14.0 mo

Fu et al. Diabetes, Obesity and Metabolism; 2011;13: 765–769
Treatment Intensification In Patients With Type 2 Diabetes Who Failed Metformin Monotherapy

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

A. Median = 14.0 mo

B. 
- Index HbA\textsubscript{1c} 7-<8% Median = 19.0 mo
- Index HbA\textsubscript{1c} 8-<9% Median = 8.7 mo
- Index HbA\textsubscript{1c} \geq 9% Median = 4.5 mo

Fu et al. Diabetes, Obesity and Metabolism; 2011;13: 765–769
Treatment Intensification In Patients With Type 2 Diabetes Who Failed Metformin Monotherapy

Time To Treatment Intensification For All Patients (A), By Index HbA₁c Level (B), By Metformin Daily Dose (C)

Fu et al. Diabetes, Obesity and Metabolism; 2011;13: 765–769
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
<table>
<thead>
<tr>
<th>Clinician-Related</th>
<th>Patient-Related</th>
<th>Healthcare System/Practice –related</th>
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<tbody>
<tr>
<td>• Insufficient time</td>
<td>• Denial of having the disease</td>
<td>• No clinical guidelines</td>
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<td>• Failure to set clear goals</td>
<td>• Denial that the disease is serious</td>
<td>• No disease registry</td>
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<td>• Failure to initiate treatment</td>
<td>• Low health literacy</td>
<td>• No visit planning</td>
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<td>• Failure to titrate treatment to achieve goals</td>
<td>• High cost of medication</td>
<td>• No active outreach to patients</td>
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<td>• Failure to identify and manage comorbidities (e.g. depression)</td>
<td>• Too many medications</td>
<td>• No decision support</td>
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<td>• Patient ‘highjacks’ the clinical encounter</td>
<td>• Medication side-effects</td>
<td>• No team approach to care</td>
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<tr>
<td>• Reactive rather than proactive care</td>
<td>• Poor communication between physician and patient</td>
<td>• Poor communication between physician and staff</td>
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<tr>
<td>• Underestimation of patient's need</td>
<td>• Lack of trust in physician</td>
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<tr>
<td></td>
<td>• SDOH, Depression or substance abuse</td>
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<tr>
<td></td>
<td>• Lifestyle factors</td>
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<td></td>
<td>• Absence of symptoms</td>
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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.

Copyright 2016. Khunti, K & Millar-Jones. D. Clinical inertia to insulin initiation and intensification in the UK: A focused literature review. Primary Care Diabetes. 2017, 11: 3–12 Illustration based on data from Paul et al. [8]. This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/).
Clinical Inertia Plays an Important Role in Delaying Intensification of Diabetes Therapy

Substantial inertia exists at each sequential intensification step

- **Patient on 1 OAD**
- **Adding 2nd OAD**
- **Adding 3rd OAD**
- **Adding insulin**
- **Adding GLP-1 RA, premixed and bolus insulin**

1. 1.6-2.9 years
2. 6.9-7.2 years
3. 6-7.1 years
4. 3.7 years

*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.
What’s in a name?

- Compliance
- Adherence
- Concordance
- Persistence
# Elements of multifaceted approaches to improve medication adherence

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


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.

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!
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