Optimize the Patient Journey: A Case-Based Approach

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Doreen Cassarino, DNP, FNP-BC, BC-ADM, FAANP
Andrew Bzowyckyj, PharmD, BCPS, CDCES
We learned that we must require either a hardwired internet connection or calling in via a landline in the future – live and learn. I think that internet in general is having more issues due to so much use.

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About Today’s Presenters

**Nick Cuttriss, MD, MPH, FAAP** is a pediatric endocrinologist and public health professional who currently serves as Director of Project ECHO Diabetes and Project ECHO Diabetes in the Time of COVID-19 at Stanford University. Dr. Cuttriss co-founded and serves as chairman of American Youth Understanding Diabetes Abroad (AYUDA).

**Doreen Cassarino DNP, FNP-BC, BC-ADM, FAANP** is a family nurse practitioner in primary care and also provides specialty diabetes care. Her passion is to help guide people with diabetes towards reaching their goals. She has shared her knowledge and clinical experience extensively at local, state, and national levels through invited speaking engagements.

**Andrew Bzowyckyj, PharmD, BCPS, CDCES** is an Associate Professor at Pacific University Oregon, and he also cares for patients in the primary care setting with Legacy Medical Group in Beaverton, Oregon. His teaching, research, and practice experiences include diabetes and other metabolic conditions, health economics and policy, and leadership development.
None of our speakers have relevant disclosures
Learning Objectives:

1. Identify where therapeutic inertia can present itself through the patient’s journey with diabetes
2. Utilize an A1C-based follow-up algorithm in your practice with more confidence.
3. Determine which medications to utilize for either post-prandial or fasting glucose improvement
4. Apply the ADA standards of care to reduce therapeutic inertia in a patient with Type 2 diabetes
“Things like to stay where they are.”

“Things like to keep doing what they’re doing.”

-A Eureka! Moment, adapted from Sir Isaac Newton 1st Law
Therapeutic Inertia Defined…

THERAPEUTIC INERTIA: The failure to initiate or intensify (or sometimes de-intensify) the therapy regimen when a patient’s therapeutic goals are not met.

CLINICAL INERTIA: Includes underuse of therapies as well as interventions known to prevent or delay negative outcomes including DSMES, screening, risk assessment, preventive measures, and referrals.
What does TI Look Like…? System failure!

National HEDIS Diabetes Report Card: Comprehensive Diabetes Care A1c Poor Control

National HEDIS Report Card:
A1c Poor Control > 9%

CASE PRESENTATION: New Diagnosis of Diabetes

You’ve been seeing Mrs. Smith for a number of years. She is a relatively healthy 62-year-old woman with well controlled hypertension and obesity (BMI = 31). At the time of her yearly physical her A1C returns at 6.9% and a repeat A1C two weeks later is 7.1%. She comes in to see you to discuss the results.
Poll Question #1

What would you recommend as an initial A1C goal?
Set A1c Goal: Targets Should be Individualized

Approach to Individualization of Glycemic Targets

<table>
<thead>
<tr>
<th>Patient / Disease Features</th>
<th>More stringent ← A1C 7% → Less stringent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risks potentially associated with hypoglycemia and other drug adverse effects</td>
<td>low (low) → high (high)</td>
</tr>
<tr>
<td>Disease duration</td>
<td>newly diagnosed (low) → long-standing (high)</td>
</tr>
<tr>
<td>Life expectancy</td>
<td>long (low) → short (high)</td>
</tr>
<tr>
<td>Important comorbidities</td>
<td>absent (low) → few/mild (medium) → severe (high)</td>
</tr>
<tr>
<td>Established vascular complications</td>
<td>absent (low) → few/mild (medium) → severe (high)</td>
</tr>
<tr>
<td>Patient preference</td>
<td>highly motivated, excellent self-care capabilities (low) → preference for less burdensome therapy (high)</td>
</tr>
<tr>
<td>Resources and support system</td>
<td>readily available (low) → limited (high)</td>
</tr>
</tbody>
</table>

American Diabetes Association Dia Care 2021;44:S73-S84
Set Glucose Goals to Correlate with A1c Target

Summary of glycemic recommendations for many nonpregnant adults with diabetes

<table>
<thead>
<tr>
<th>A1C</th>
<th>&lt;7.0% (53 mmol/mol)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preprandial capillary plasma glucose</td>
<td>80–130 mg/dL (4.4–7.2 mmol/L)</td>
</tr>
<tr>
<td>Peak postprandial capillary plasma glucose</td>
<td>&lt;180 mg/dL (10.0 mmol/L)</td>
</tr>
</tbody>
</table>
Social Determinants of Health (SDOH)

- Support system
- Psychological status
- Economic concerns
- QOL
Diabetes Self-Management Education & Support (DSMES)

KEY CONCEPTS OF DSMES
1. Healthy Eating
2. Monitoring
3. Being Active
4. Taking Medication
5. Healthy Coping
6. Reducing Risks
7. Problem Solving

CRITICAL TIMES FOR DSMES
1. At diagnosis
2. Annual assessment
3. New complicating factors
4. When transitions in care occur
Blood Glucose Monitoring

• **Avoid using “good” or “bad” blood sugars**
  • In target, above target (high), below target (low)

• **Avoid using “Test” blood sugar**
  • Use “check”, “monitor”, etc.
  • People with diabetes should not be on trial!

• **If going to check blood sugar then need to consider 3 questions:**
  1. Why Check?
  2. When to check?
  3. What to do when you check?
Glucose monitoring: New Era

Urine

Blood glucose

Continuous glucose monitoring (iCGM, FGM)
Glucose-lowering medication in type 2 diabetes: 2021 ADA Professional Practice Committee (PPC) adaptation of Davies et al.

American Diabetes Association Dia Care 2021;44:S111-S124

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To Consider…

Treat to Goal

Vs.

Treat to Failure
Reducing Risks

- Smoking cessation
- BP Management
- Lipid management
- Monitoring for nephropathy
- Ophthalmology referral
- Dental visits
- Foot exams and foot care education
- Addressing underlying SDOH and behavioral health issues
Inertia Busting Checklist

✓ Personalize A1C
✓ Correlate glucose targets with A1C
  (consider remote monitoring)
✓ Address social determinants of health
✓ Assess for DSMES referral
✓ Customizing therapeutic approach
✓ Risk reduction
✓ Follow up based on A1C and therapy change
Clinical Perspectives in Overcoming TI
CASE PRESENTATION: 7 Years Later…

Unfortunately, Mrs. Smith (now 69 years old) was lost to follow-up as she moved out of state for four years to care for her elderly father. She is back to reestablish as a patient. She has been taking metformin 1000 mg daily since she was diagnosed with diabetes, and glyburide 10 mg daily was added ~ 2 years ago. Her A1C today is 8.9%.
POLL #2:

What do you think should be prioritized in this visit?
The Many Faces of A1C

- A1c is just an average.
- A1c is not a one-size-fits all metric.
- A1c does not capture hypoglycemia.
- A1c does not capture time spent in different glucose ranges and glycemic variability.
- A1c does not capture how different therapies affect quality of life.

Go Beyond A1C

https://diatribe.org/beyondA1c
Beyond A1C: Key points included in standard Ambulatory Glucose Profile (AGP) report

### AGP Report

<table>
<thead>
<tr>
<th>GLUCOSE STATISTICS AND TARGETS</th>
<th>TIME IN RANGES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>14 days % Sensor Time</strong></td>
<td></td>
</tr>
</tbody>
</table>

#### Glucose Ranges | Targets [% of Readings (Time/Day)]
--- | ---
Target Range 70–180 mg/dL | Greater than 70% (16h 48min)
Below 70 mg/dL | Less than 4% (58min)
Below 54 mg/dL | Less than 1% (14min)
Above 180 mg/dL | Less than 25% (6h)
Above 250 mg/dL | Less than 5% (1h 12min)

Each 5% increase in time in range (70–180 mg/dL) is clinically beneficial.

#### Average Glucose

#### Glucose Management Indicator (GMI)

#### Glucose Variability

Defined as percent coefficient of variation (%CV); target ≤36%

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Type 1 & Type 2 Diabetes

- Target Range: 70–180 mg/dL (3.9–10.0 mmol/L)
- Target: <70 mg/dL (3.9 mmol/L)
- <54 mg/dL (3.0 mmol/L)

- >250 mg/dL (13.9 mmol/L)
- >180 mg/dL (10.0 mmol/L)

- Target <5%
- <25%
- >70%
- <4%
- <1%
### Treatment Goals in Older Adults

<table>
<thead>
<tr>
<th>Patient characteristics/Health status</th>
<th>Rationale</th>
<th>Reasonable A1C goal‡</th>
<th>Fasting or preprandial glucose</th>
<th>Bedtime glucose</th>
<th>Blood pressure</th>
<th>Lipids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy (few coexisting chronic illnesses, intact cognitive and functional status)</td>
<td>Longer remaining life expectancy</td>
<td>&lt;7.0–7.5% (53–58 mmol/mol)</td>
<td>80–130 mg/dL (4.4–7.2 mmol/L)</td>
<td>80–180 mg/dL</td>
<td>&lt;140/90 mmHg</td>
<td>Statin unless contraindicated or not tolerated</td>
</tr>
<tr>
<td>Complex/intermediate (multiple coexisting chronic illnesses* or 2+ instrumental ADL impairments or mild-to-moderate cognitive impairment)</td>
<td>Intermediate remaining life expectancy, high treatment burden, hypoglycemia vulnerability, fall risk</td>
<td>&lt;8.0% (64 mmol/mol)</td>
<td>90–150 mg/dL (5.0–8.3 mmol/L)</td>
<td>100–180 mg/dL</td>
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<td>Very complex/poor health (LTC or end-stage chronic illnesses** or moderate-to-severe cognitive impairment or 2+ ADL impairments)</td>
<td>Limited remaining life expectancy makes benefit uncertain</td>
<td>Avoid reliance on A1C; glucose control decisions should be based on avoiding hypoglycemia and symptomatic hyperglycemia</td>
<td>100–180 mg/dL (5.6–10.0 mmol/L)</td>
<td>110–200 mg/dL</td>
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Glucose-lowering medication in type 2 diabetes: 2021 ADA Professional Practice Committee (PPC) adaptation of Davies et al.
Social Determinants of Health (SDOH)

• Change over time and need to be reassessed and review

• Under appreciated

• Screen for depression (PHQ9) and diabetes distress
Inertia Busting Checklist

✓ Personalize A1C
✓ Correlate glucose targets with A1C  
  (consider remote monitoring)
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✓ Assess for DSMES referral
✓ Customizing therapeutic approach
✓ Risk reduction
✓ Follow up based on A1C and therapy  
  change
Clinical Perspectives in Overcoming TI
Mrs. Smith is now 84. She was on 2 OADs (metformin + SGLT2i) for 7 years and had been doing well, until 3 years ago when her A1C had crept up to 10.3% and her SMBG results show fasting glucoses in the 200-250 mg/dl range.

At that time, her therapy was switched to basal + bolus insulin. She is now presenting with stage 3 CKD, middle stage dementia, multiple other comorbidities, and she recently moved into a LTC facility. Her A1C today is 6.5% and her SMBG result show glucoses in the 60-150 range.
Poll Question #3

What would you recommend for Mrs. Smith’s fasting glucose targets after today’s visit?
## Treatment Goals in Older Adults

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<td>100–180 mg/dL (5.6–10.0 mmol/L)</td>
<td>110–200 mg/dL (6.1–11.1 mmol/L)</td>
<td>&lt;150/90 mmHg</td>
<td>Consider likelihood of benefit with statin</td>
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## Notes
- A1C: Hemoglobin A1C
- ADL: Activities of Daily Living
- LTC: Long-Term Care
- *: For individuals 75 years and older
- **: For individuals 65 years and older
- ‡: These goals may be adjusted based on comorbidities and patient preferences.
Simplifying insulin regimens for older patients with type 2 diabetes

**Simplification of Complex Insulin Therapy**

- **Patient on basal (long- or intermediate-acting) and/or mealtime (short- or rapid-acting) insulins**
  - **Basal insulin**
    - Change timing from bedtime to morning
    - Titrate dose of basal insulin based on fasting fingerstick glucose test results over a week
      - **Fasting Goal:** 90–160 mg/dL (5.0–8.8 mmol/L)
      - May change goal based on overall health and goals of care
  - **Mealtime insulin**
    - If mealtime insulin >10 units/dose:
      - ↓ dose by 50% and add noninsulin agent
    - Titrating mealtime insulin doses down as noninsulin agent doses are increased with aim to discontinue mealtime insulin

- **Patient on premixed insulin**
  - Use 70% of total dose as basal only in the morning
  - Add noninsulin agents:
    - If eGFR is >45 mg/dL, start metformin 500 mg daily and increase dose every 2 weeks, as tolerated
    - If eGFR is <45 mg/dL, patient is already taking metformin, or metformin is not tolerated, proceed to second line agent

**Additional Tips**
- Do not use short-acting insulin at bedtime
- While adjusting mealtime insulin, may use simplified sliding scale, for example:
  - **Premixed insulin**:
    - Fast 80 mg/dL (4.4 mmol/L)
    - ↓ dose by 2 units
  - If >2 fasting fingerstick values/week are <80 mg/dL (4.4 mmol/L)
    - ↑ dose by 2 units

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eGFR, estimated glomerular filtration rate. *Basal insulins: glargine U-100 and U-300, detemir, degludec, and human NPH. **See Table 12.1. ¥Mealtime insulins: short-acting (regular human insulin) or rapid-acting (lispro, aspart, and glulisine). §Premixed insulins: 70/30, 75/25, and 50/50 products

American Diabetes Association Dia Care
2021;44:S168-S179
Glucose-lowering medication in type 2 diabetes: 2021 ADA Professional Practice Committee (PPC) adaptation of Davies et al.

Add-on therapy?

American Diabetes Association Dia Care 2021;44:S111-S124

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Inertia Busting Checklist

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- Assess for DSMES referral
- Customizing therapeutic approach
- Risk reduction
- Follow up based on A1C and therapy change
Clinical Perspectives in Overcoming TI
Six Inertia Busters to Implement in Your Practice Right Now

1. Establish “Diabetes Only” visits that prioritize diabetes care assessment and intervention.

2. Refer all persons with Diabetes DSMES at least one time in their lifetime of treatment (irrespective of individuals’ likelihood to attend).

3. Develop a follow up interval based on target A1C or medication change for all patients.

4. Identify diabetes team members for your practice location and collaborate with them on patient care.

5. Aim to alter therapeutic intervention at all encounters when target is not achieved.

6. Make sure all office contacts (receptionist, medical assistants, nurses, and care coordinators) are aware of the inertia busters in place and reinforce them during patient interactions.
Questions?
Your Action Assignment - Should you choose to accept it!

1. **Download** “Your Diabetes Care and Management Plan” to share with your patients

2. **Download** “7 Easy Strategies: Overcome Therapeutic Inertia Tomorrow” – Practice Action Checklist

3. **Share the** “Getting to Goal: Overcoming Therapeutic Inertia in Diabetes Care” fact sheet to share with all your clinic staff

4. Take the post-webinar survey – in your email box  
   *(and immediately following this presentation)*

Learn more at…[TherapeuticInertia.Diabetes.org](http://TherapeuticInertia.Diabetes.org)
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Standards of Care App

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App Store - iOS  Google Play - Android  Web App

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https://professional.diabetes.org/content-page/standards-care-app-1
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5. Engaging Your Team and Community as an Inertia Buster
6. Optimize the Diabetes Patient Journey: A Case-Based Approach for Busting Inertia

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Questions?