Healthcare Beyond A1C

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  - Please refer to learning goals and objectives
  - Learners must attend the full activity and complete the evaluation in order to claim continuing education credit/hours

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Agenda

1. #BeyondA1c and Standardizing CGM Outcomes
2. A Day in the Life – Why This Matters
3. What might diabetes care look like in a Beyond-A1c era?

“The if stand with one foot in a bucket of ice water and one foot in a bucket of boiling water, on average, I am comfortable.”

The Many Faces of a 7% A1c

Time spent

<table>
<thead>
<tr>
<th>Time spent</th>
<th>HIGH</th>
<th>IN RANGE</th>
<th>LOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24%</td>
<td>58%</td>
<td>18%</td>
</tr>
<tr>
<td>2</td>
<td>29%</td>
<td>63%</td>
<td>18%</td>
</tr>
<tr>
<td>3</td>
<td>8%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>
### A1c Estimated mean glucose (mg/dl), 95% Confidence Interval

<table>
<thead>
<tr>
<th>A1c</th>
<th>Current study (n = 387)</th>
<th>ADAG study (n = 507)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6%</td>
<td>101–163 mg/dl</td>
<td>100–152 mg/dl</td>
</tr>
<tr>
<td>7%</td>
<td>128–190 mg/dl</td>
<td>123–185 mg/dl</td>
</tr>
<tr>
<td>8%</td>
<td>155–218 mg/dl</td>
<td>147–217 mg/dl</td>
</tr>
<tr>
<td>9%</td>
<td>182–249 mg/dl</td>
<td>170–249 mg/dl</td>
</tr>
<tr>
<td>10%</td>
<td>209–273 mg/dl</td>
<td>193–282 mg/dl</td>
</tr>
</tbody>
</table>

*The Fallacy of Average,* Beck et al., Diabetes Care, 2017

"The diabetes community's] unity, commitment, and grit is really noted."

–Dr. Janet Woodcock, Director, FDA, CDER
### Hypoglycemia

<table>
<thead>
<tr>
<th>Severe: Requiring assistance</th>
<th>In Range</th>
<th>Hyperglycemia</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;54 mg/dl</td>
<td>&lt;70 mg/dl</td>
<td>&gt;70-180 mg/dl</td>
</tr>
<tr>
<td>&lt;70 mg/dl</td>
<td>70-180 mg/dl</td>
<td>&gt;180 mg/dl</td>
</tr>
<tr>
<td>&gt;180 mg/dl</td>
<td>&gt;250 mg/dl</td>
<td>DKA</td>
</tr>
</tbody>
</table>

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1. #BeyondA1c and Standardizing CGM Outcomes
2. A Day in the Life – Why This Matters
3. What might diabetes care look like in a Beyond-A1c era?

### “For diabetes, a beneficial therapy must help a patient feel better, function better, and/or live longer.”

- Dr. Janet Woodcock, FDA CDER Director

### Two days with a similar average...

- Time-in-range: ease, calm, gliding, living my life
- Time-out-of-range: burden, stress, exhaustion, frustration

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**Glycemic Outcomes Beyond A1C**

**Standardization and Implementation**

Friday, July 21, 2017: 8:00 AM - 5:00 PM
#DSMA Live Twitter Chat on Hypoglycemia

Why does taking care of my diabetes, keeping blood glucose in range, eating well, and exercising matter TODAY?

Why does it matter RIGHT NOW?

diTribe.org/BrightSpots

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Expect to…

1) Have richer access to data (CGM, pump, smart pen) and more automatic decision support to analyze it.
2) Focus more on emotional well being and less on the numbers.
3) Move from face-to-face to remote, more continuous communication (text, chat, video)
4) Leverage new tools for education: voice, virtual and augmented reality (VR/AR)

IBM Watson in Oncology

Precision Medicine for Diabetes? “This patient is most likely to benefit from drug C”

<table>
<thead>
<tr>
<th>Demographic and Clinical Characteristics</th>
<th>Patient Example</th>
<th>Treatment</th>
<th>Probability of Achieving HbA1c &lt; 7.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (yrs.)</td>
<td>64</td>
<td>Diet and Exercise</td>
<td>0.05</td>
</tr>
<tr>
<td>Sex</td>
<td>Male</td>
<td>Drug A</td>
<td>0.60</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>Caucasian</td>
<td>Drug B</td>
<td>0.58</td>
</tr>
<tr>
<td>BMI (kg/m²)</td>
<td>32</td>
<td>Drug C</td>
<td>0.87</td>
</tr>
<tr>
<td>Fasting Glucose (mg/dl)</td>
<td>175</td>
<td>Drug D</td>
<td>0.33</td>
</tr>
<tr>
<td>HbA1c (%)</td>
<td>8.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes Duration (yrs.)</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous Treatment</td>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DreaMed Advisor Pro (through Glooko) – Optimizing Pump Settings

Change basal rate to 0.85 u/hr from 8-11pm
Update correction factor to 1:25
Pivotal trial expected to start next month

Medtronic/IBM Watson: Sugar.IQ

What will an appointment look like “Beyond A1c”?

Health Related Quality of Life

- Joy
- Mental Health
- Physical Health
- Sleep
- Energy
- A1c
- Hypoglycemia
- Hyperglycemia
- Time in range
“Productivity is for robots. What humans are going to be really good at is asking questions, being creative, and experiences.”

– Kevin Kelly, Wired Co-Founder, on the future of technology

“People talking to people is still how the world’s standards change.”

– Dr. Atul Gawande
“Slow Ideas” in The New Yorker

Implication...
In an outcomes beyond A1c world, educators will be MORE needed and more critical than ever!

Download a free copy:
diaTribe.org/BrightSpots

This book is literally like carrying around an educator, a friend, and a safety net all in one. I have highlighted and flagged more pages in this book than any other book I've ever owned (and I graduated from college). – Shannon

THANK YOU!
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