A Stepwise Approach to Continuous Glucose Monitoring (CGM) Interpretation

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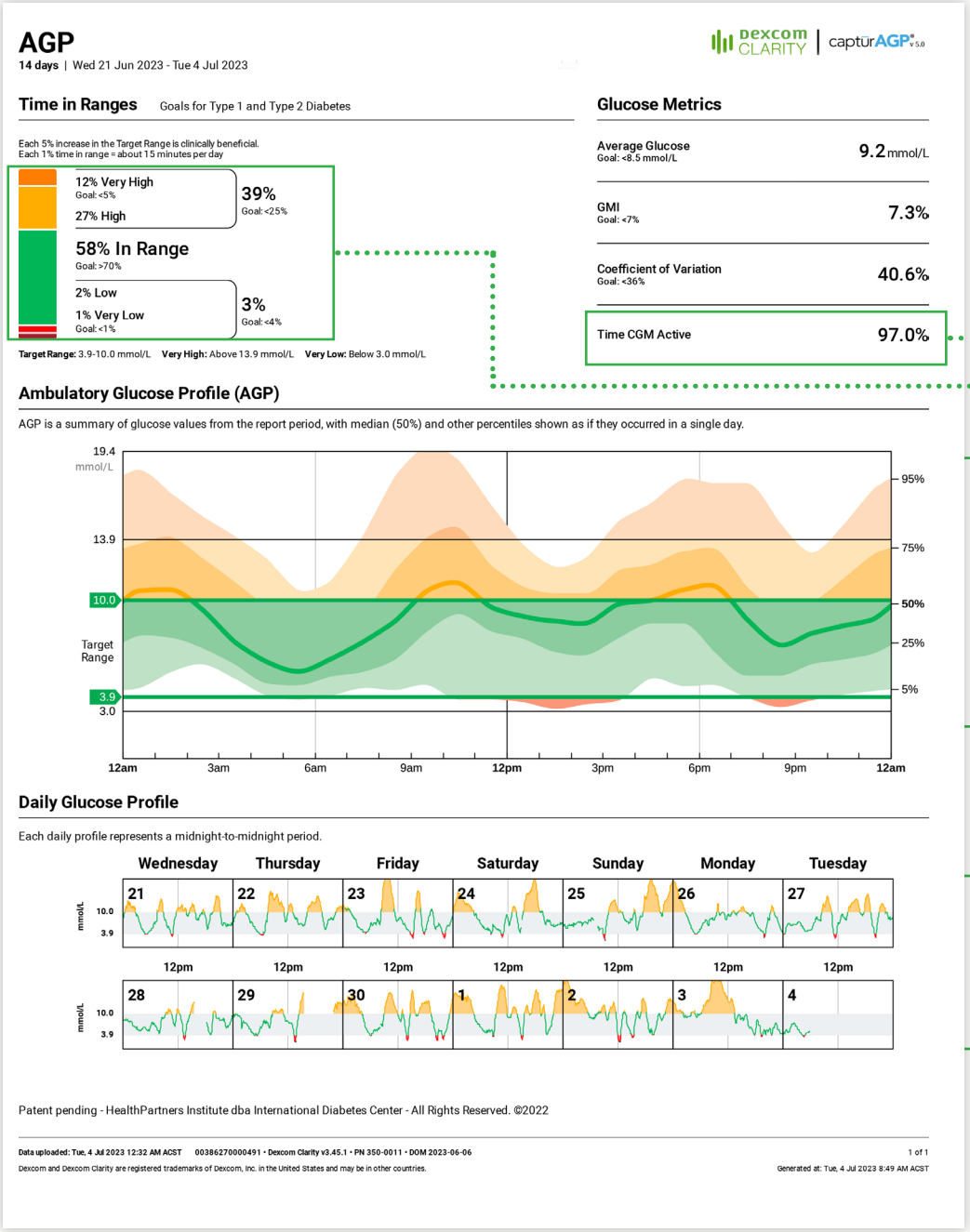
To address the need for tools to interpret CGM data quickly and efficiently during primary care visits, Szmuilowicz and Aleppo created a streamlined, three-step approach.[1] Using this stepwise approach, the report has three distinct sections.



? Before getting started, assess if there is enough data to be analyzed?

- Consensus recommendation is > 70% time CGM active during 14 days.[2]

1 What is the problem?

- Review standard CGM metrics
- Look for hypoglycemia and hyperglycemia
- Are time in range (TIR) goals met?[2]

2 Where is the problem?

- Ambulatory Glucose Profile (AGP) shows patterns that are present
- Does a pattern exist? What time of day is the pattern?

3 How to adjust therapy?

- Check daily glucose data
- Use shared decision-making to discuss plan
- See figure below for suggested therapeutic modifications for people with type 2 diabetes only[1]

1. Adapted from Szmuilowicz E, Aleppo G. Postgraduate Medicine. 2022; 134(8):743-751. 2. Battelino T et al. Diabetes Care. 2019;42(8):1593-1603.
†These recommendations are from a published paper. HCPs should exercise their professional judgement in deciding whether to follow these recommendations for individual patients

Quick tips:

- Address hypoglycemia first[1]
- If no hypoglycemia, assess fasting and/or postprandial hyperglycemia[1]
- Focus on one therapeutic change per visit[1]
- Engage person living with diabetes in shared decision-making

Glycemic pattern		Therapeutic modifications†
Hypoglycemia		
	Fasting/Overnight	Decrease basal insulin or sulfonylurea
	Post-prandial	Decrease mealtime insulin or sulfonylurea
Hyperglycemia		
	Fasting	
	Glucose decreases by ≥50 mg/dL (≥2.8 mmol/L) overnight from bedtime to fasting next morning	- Adjust carbohydrate amount and/or meal composition at evening meal - Add/increase mealtime insulin at one or more meals OR add/increase agent which lowers both postprandial and fasting glucose (GLP-1 RA, metformin, SGLT-2 inhibitor, DPP-4 inhibitor)
	Glucose decreases by <50 mg/dL (<2.8 mmol/L) overnight from bedtime to fasting next morning	Add/increase agent which lowers fasting glucose (basal insulin) OR add/increase agent that lowers both postprandial and fasting glucose (GLP-1 RA, metformin, SGLT-2 inhibitor, DPP-4 inhibitor)
	Post-prandial	- Adjust carbohydrate amount and/or meal composition at meal(s) needed - Add/increase mealtime insulin at one or more meals OR add/increase agent which lowers both postprandial and fasting glucose (GLP-1 RA, metformin, SGLT-2 inhibitor, DPP-4 inhibitor)

Try your new skills in this case below.

Case Example

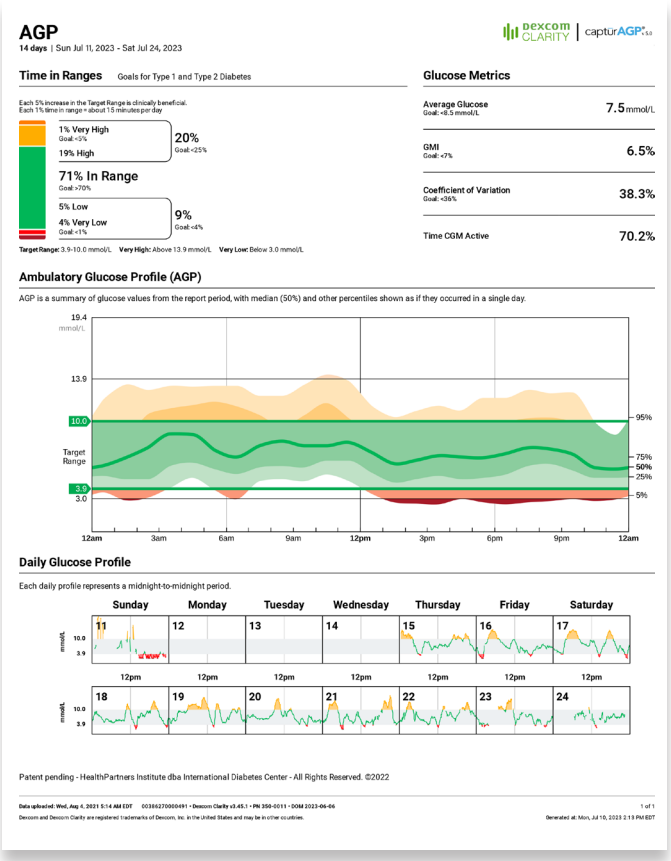
? Is there enough data to analyze?

1 What is the problem?

2 Where is the problem?

3 How to adjust therapy?

Answer key: ? Yes 1. hypoglycemia - 9% 2. afternoon, evening, 12:00-3:00, and 6:00. 3. Review suggested therapeutic modifications in Step 3.



Scan the code to watch a presentation on the Stepwise Approach.

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1.Emily D. Szmuilowicz & Grazia Aleppo (2022): Stepwise approach to continuous glucose monitoring interpretation for internists and family physicians, Postgraduate Medicine, DOI: 10.1080/00325481.2022.2110507, reprinted by permission of the publisher Informa UK Limited trading as Taylor & Francis Ltd, http://www.tandfonline.com.