

A Love Letter To My Wound Care Friends: Collaborating To Care For The 'Ton' Of People With Type 2 Diabetes

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Dearest Gentle Reader,

It's no secret that we're in the middle of a health-care crisis and that, despite our individual efforts, the number of people being diagnosed with diabetes every day continues to grow, putting more Canadians at risk of diabetes complications.¹⁻³ I'm writing to you because although the idea of stopping this exponential growth seems overwhelming, it is my hope that our collaborative efforts will be stronger together; and that we can make a difference by impacting the seeming ton of people affected by diabetes, one individual at a time.

The good news is that, in my opinion, in comparison to 25 years ago when I first became a diabetes educator, the management of type 2 diabetes is generally easier. People with type 2

diabetes now have more management options, including:

- **Remission of type 2 diabetes**,^{4,5} which is possible for some individuals when they are not taking blood glucose-lowering medications for at least three months and their A1C is either:
 - ✓ A1C between 6.0 - 6.4 % → remission to prediabetes
 - ✓ A1C <6.0 % → remission to normoglycemia.
- **Optimizing incretin mimetics**,⁶ i.e., GLP-1 receptor agonists and dual GIP/GLP-1 receptor agonists, and/or SGLT2 inhibitors which are not, on their own, affiliated with hypoglycemia and which:
 - ✓ Have robust glucose-lowering efficacy (often supporting A1C goals within non diabetes ranges)
 - ✓ Support weight management.



- **When insulin is needed**, using insulin regimens with less risk of hypoglycemia⁷
- **Using 2nd generation basal analogue insulins**, e.g., insulin degludec or insulin glargine U-300, over 1st generation basal analogue insulins, e.g., insulin detemir, insulin glargine U-100.
- **Using continuous glucose monitoring (CGM)** to support personalized glycemic goals.^{6,8}

In this letter, I am limiting my comments to discussing the use of CGM in people with diabetes.

What Is Continuous Glucose Monitoring (CGM)?

With continuous glucose monitoring (CGM), a sensor, inserted into the interstitial space under the skin, measures the body's glucose at regular intervals. These measurements are translated into a blood glucose value and displayed on a compatible smart phone, or on a stand-alone device, where the user learns their current glucose value and the direction and speed the glucose is changing. Most commonly, the sensor is changed once every 10 or 14 days, depending on the system used.

Continuous glucose data can help a person proactively manage and prevent glucose highs and lows. Alerts can be personalized to give real-time insights into how the body is responding to factors such as eating patterns, physical activity (intensity and duration), stress and sleep. CGM systems also provide aggregate data such as sensor-derived A1C, Time in Ranges and glycemic variability, which all provide an indication of the person's risk of diabetes complications reflective

of the determined timeframe.

At present, the two most commonly used CGM systems in Canada are the Freestyle Libre 2™ system⁹ and the Dexcom G6^{10™} or Dexcom G7^{11™} systems.

Situation

Can we collectively optimize the use of CGM?

Studies demonstrate that continuous glucose monitoring (CGM) systems are a powerful tool to support improved health outcomes in people living with diabetes.⁸ However, my personal observation amongst the ton of people with diabetes that I support in clinical practice is that CGM is both under-accessed and under-utilized/under-actioned upon. In this letter to you, I ask for your help in solving this problem. Can we collectively optimize the use of CGM?

1. Can we ensure that people who can benefit from CGM are recommended CGM according to their needs?

- Similarly, can we ensure that those people who are using CGM, but who don't need CGM, are gently encouraged to recognize the importance of cost-effective choices in diabetes self-management and not use CGM when there is no indication for CGM, i.e. when CGM is not needed?

2. Can we ensure that people who are using CGM, are actually benefiting from CGM, i.e., using the data from CGM to inform daily decision making and, where applicable, medication adjustments?

Assessment

Who can benefit from CGM? Addressing the ‘under-access’ of CGM.

How can we assess that the person using CGM is actually benefiting from CGM?

Table 1: Individuals with diabetes who could benefit from using glucose monitoring¹²

Individual characteristics	A1C above target	A1C is at target
Individual* IS at risk of hypoglycemia†	Continuous CGM to prevent / manage hypoglycemia	Continuous CGM to prevent / manage hypoglycemia
Individual* is NOT at risk of hypoglycemia‡	CGM until the person meets their glycemic targets, then → → →	*Consider/recommend STOP continuous CGM *Consider episodic CGM use, e.g., wear sensor for 10 to 14 days every 3 to 6 months
Individual* is pregnant	Continuous CGM while pregnant	Continuous CGM while pregnant

*Provided the person is willing to learn from and act on CGM data, i.e., adjusting insulin (or other medication) doses and/or supporting daily eating and activity decisions.

† Individuals at risk of hypoglycemia are individuals who use insulin and/or an insulin secretagogue (e.g., gliclazide, glyburide) to manage their diabetes.

‡ Individuals NOT at risk of hypoglycemia are individuals who manage their diabetes without the use of insulin and/or an insulin secretagogue (e.g. gliclazide, glyburide).

How can we assess that the person using CGM is actually benefiting from CGM?

1. Ensure appropriate CGM data collection.
 - CGM data collection/sensor usage should be a minimum of 70%¹³
 - When CGM data collection is below 70%: ensure the person is keeping the app open on their smart phone (running in the background) and/or ensure the person is keeping their phone with them. For example, some people leave their phone in the kitchen when they go to sleep in the bedroom which is greater than 6 m away, resulting in a loss of data sensor capture.
 - If the person is using a Freestyle Libre 2 reader, the person must scan the sensor to pull the data to the reader a minimum of every eight hours. (Suggest that they scan on waking, before every meal, at bedtime and, if they happen to be awake during the night, scan at that time).
2. Assess glycemic metrics.

- Looking at a person’s CGM app, i.e., Libre 2, Dexcom G7 and/or Clarity™, will efficiently identify if the person is meeting their glycemic goals and/or whether the individual could benefit from additional glycemic management support.
 - Glycemic metrics and their typical goals are listed in Table 2 with a real-life assessment demonstrated in Appendix A.
3. Have the person explain the actions they take in response to CGM data, i.e., blood glucose results with trend arrow and daily graphs.
 - A conversation with the person using CGM will determine if the person understands what the CGM data is telling them and what kinds of actions they can take to stay in the green zone.

Recommendations

Take Home Messages

1. Solving under-access:
 - Wound care team members can recognize when a person could benefit from access to CGM (as listed in Table 1) and recommend CGM

Table 2: Glycemic Metrics And Typical Goals¹³

Glycemic Metric	Typical Goal
Data sensor capture	Greater than 70%
Time In Ranges:	
Time In Range (3.9 – 10.0 mmol/L)	Greater than 70 % (greater than ~17 hr/day)
Time Below Range	
• low (below 3.9 mmol/L)	Less than 4 % (less than ~1 hour/day)
• very low (below 3.0 mmol/L)	Less than 1 % (less than ~15 min/day)
Time Above Range	
• high (above 10.0 mmol/L)	Less than 25 % (less than 6 hours/day)
• very high (above 13.9 mmol/L)	Less than 5 % (less than 72 min/day)
Glucose Management Indicator (GMI), aka sensor-derived A1C	See Diabetes Canada targets table, available at: https://guidelines.diabetes.ca/GuideLines/media/Images/cpg/SA-Fig1-A1C-targets-expanded.png
Glucose Variability	Less than or equal to 36 %

To determine CGM data collection and to assess glycemic metrics:

- If FreeStyle Libre2 monitoring system:
 - ✓ When the person is using a smart phone, use the Libre2 app, dropdown menu
 - ✓ Health-care provider portal: Libreview.com
- If Dexcom monitoring systems, either:
 - ✓ When Dexcom G6, use the Clarity app
 - ✓ When Dexcom G7, when using a smart phone, use the Dexcom G7 app and/or the Clarity app
 Health-care provider portal: <https://clarity.dexcom.eu/professional/>

- sions, such as what to eat and when/how to exercise.
- ask them about their glucose metrics (See table 2 for glucose metrics and recommended goals).
- Particularly, if a person is not getting to their individualized glycemic goals (as listed in Table 2):
 - help them to recognize that they may have options in their type 2 diabetes management (a few of which are listed above). Refer the individual to other diabetes health-care team members, e.g., primary care providers, pharmacists and diabetes education programs to optimize the benefits of CGM technology.

Yours in good health,
Lady Susie

appropriately and/or refer the individual with diabetes to other diabetes health-care team members, e.g., primary care providers, pharmacists, diabetes education programs.

2. Solving under-utilization (under-actioning) of CGM:

- When wound care team members identify that a person is using/wearing CGM:
 - ask them about how they use the data from their sensor to support daily health-care deci-

P.S. If you have any comments for the author, please reach out via susie.jin@alumni.utoronto.ca. Similarly, if you have an idea which could improve collaboration with diabetes educators, please send to susie.jin@alumni.utoronto.ca. We will put this forward for publication in the *Diabetes Canada Diabetes Communicator* publication to be read by diabetes educators across our nation.

When glucose monitoring is indicated (See populations listed in Table 1), continuous glucose monitoring (CGM) technology, when accessible, is preferred over capillary blood glucose (CBG) monitoring.

• When caring for an individual with diabetes, if they are monitoring their blood sugars using CBG checks (i.e., finger stick pokes), ask them to explain to you how they are actioning on the data that they derive from CBG monitoring. Consider referring them back to their primary care provider and/or diabetes health-care team to see if CGM would be accessible and more appropriate for them

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