

PEAR VS. THE PANDEMIC

SUPPORTING OUR PHARMACY STAKEHOLDERS DURING THE COVID-19 CRISIS

CONSIDERATIONS FOR CARE OF THE PATIENT WITH DIABETES

People with diabetes, particularly those with poor glycemic control, are at higher risk of serious complications due to COVID-19. Having heart disease or other diabetes complications can further increase this risk.^{1,2} People with diabetes, particularly those with type 1 diabetes, are at higher risk of developing diabetic ketoacidosis and subsequent sepsis, if they become infected with COVID-19.^{3,4}

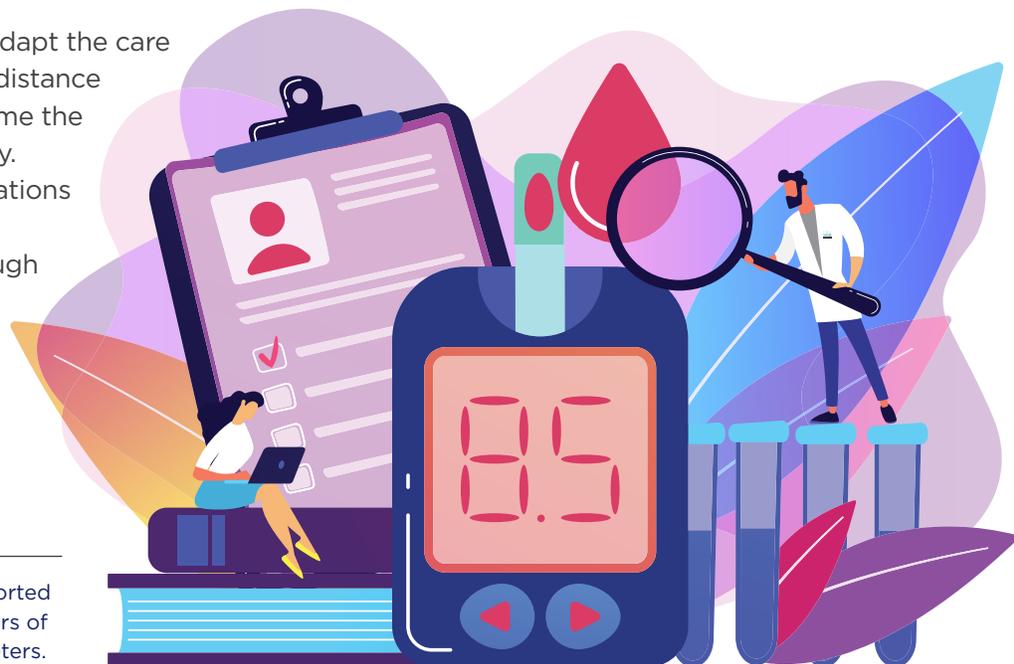
During this pandemic, many of these patients may have increased stress, or food or financial insecurity, or there may be gaps in the care that they are receiving. People with chronic diseases such as diabetes are at risk of depression and distress, and that risk may be heightened at this time, leading to reduced adherence to treatment.⁵ Stress can contribute to release of counter-regulatory hormones such as cortisol and norepinephrine, which can, in turn, increase glucose levels.⁶

It is important for pharmacists to adapt the care that they provide, whether from a distance or face to face, for what may become the “new normal” of healthcare delivery. Telephone and web-based consultations are more common at this time. Text-based interventions (i.e., through a mobile phone to a patient) have been shown in some randomized controlled trials to improve A1C in patients with diabetes and/or to improve their self-management capacity.⁷

This document has been generously supported by **Ascensia Diabetes Care Canada**...makers of CONTOUR[®]NEXT brand blood glucose meters.

This document will address the following questions:

- 1 What are key areas of counselling that pharmacists should focus on with their patients with diabetes during the pandemic and beyond?
- 2 How should pharmacists advise patients with diabetes to plan for the possibility that they could become ill due to COVID-19?



1 ADDRESS CARE GAPS DURING COUNSELLING

The following points highlight some areas in which gaps may exist or which may be particularly challenging for some patients with diabetes at this time.

- Ask about **medication adherence** and reinforce the importance of taking medications.
 - Ask about missed doses of medication and ensure patients have adequate supplies, including those used to prevent or treat diabetes-related complications.
 - Discuss with patients the importance of continuing medications unless otherwise advised by their healthcare team OR if they become ill (see next section on planning for illness). People taking ACE inhibitors or ARBs should continue these medications unless otherwise instructed by their prescriber, as there is no evidence that these medications increase the risk of COVID-19 or disease severity.⁸
 - Remind patients to wash their hands before administering insulin or other medications by injection.
- Discuss the importance of **glucose monitoring** and sharing results.
 - Ask patients with access to technology to share glycemic monitoring data via cloud-based software, regardless of their method of testing. For others, determine how best to share glucose results (e.g., on the phone, by fax, or by planned visits to the pharmacy).
 - Look for trends and reports that offer information to guide treatment decisions with patients who use continuous or flash glucose monitoring systems.
 - Remind patients that good glycemic control can help to reduce the risk of serious complications such as pneumonia.^{9,10,11}
 - Remind patients to wash hands before finger-stick testing or applying glucose monitoring sensors.
- Find out if the patient has challenges with **food supply and nutrition**.
 - Reduced access to food during emergency situations has been associated with increases in A1C in people with diabetes.¹² During this crisis, people may rely on high-carbohydrate food choices that are more shelf-stable, which can affect glycemic control.
 - Suggest canned beans, fruits, and vegetables; nut butters; and whole grain cereals for the pantry, and frozen meats, fruits, and vegetables to reduce frequency of trips to the store.
 - Offer information about local food delivery services and encourage patients to plan meals and grocery shopping in advance to ensure that they are able to maintain a healthy diet.
- Ensure that patients have had appropriate **vaccinations**.¹³
 - Ask about routine vaccinations to confirm that they are up-to-date.
 - Discuss influenza vaccination with patients in preparation for the upcoming season.
 - Review recommendations for pneumococcal vaccinations (polysaccharide [Pneu-P-23] and conjugate [Pneu-C-13] vaccines). The conjugate vaccine is part of the routine immunization schedule for children, while the polysaccharide vaccine is recommended for those 24 months of age or over who are at high risk of invasive pneumococcal disease (IPD) due to medical conditions, as well as adults who live in long-term care facilities, those who are 65 years of age and older, and those who are at high risk of IPD due to lifestyle factors such as smoking, homelessness, or alcohol abuse. Those at highest risk should receive a booster dose of the polysaccharide vaccine.¹⁴
- Explore **physical activity** opportunities for the patient.
 - Being active is an important part of diabetes management and can help to maintain a healthy weight, decrease insulin resistance, and improve lipid levels, glucose control, blood pressure, and cardiorespiratory fitness.¹⁵

- Some people may become more sedentary during isolation, so you can encourage home-based exercises (e.g., walking around the home; one step up, one down on stairs every few hours) or walking outdoors if patients are able.¹⁶

2 PLANNING FOR ILLNESS

People with diabetes may be fearful of becoming ill and passing this on to others in their family. Pharmacists can help patients prepare for the possibility that they may get COVID-19 or other types of illness. Here are some points that you can review with patients.

- Ensure that your patient has sufficient supplies on hand to treat and monitor diabetes, including:⁸
 - Two-week supply of medications and testing materials, with refills available
 - Pump supplies if using an insulin pump
 - Simple sugars (e.g., glucose tablets, honey, Life Savers[®]) in case of hypoglycemia
 - Glucagon (if taking insulin or medications that can cause hypoglycemia)
 - Rubbing alcohol, hand soap, and hand sanitizer
 - An up-to-date medication list, including over-the-counter products
 - A list of healthcare providers and their contact information
- Review symptoms to watch for and how to respond if they occur.
 - Symptoms of COVID-19: Contact the local public health authority if symptoms such as dry cough, shortness of breath, and fever occur. Other symptoms of COVID-19 can also occur (see <http://www.bccdc.ca/health-info/diseases-conditions/covid-19/about-covid-19/symptoms> for a list of symptoms).
 - Other symptoms: Remind patients about symptoms of myocardial infarction and stroke, as patients with diabetes may be at higher risk, and to call 9-1-1 if they occur.

- Advise patients about sick day management and when to stop certain medications if they become ill with COVID-19.¹⁷ Sick day management includes:
 - Drink fluids frequently to reduce the risk of dehydration.
 - Increase frequency of glucose testing because infection can increase glucose levels.
 - Eat smaller portions more frequently.
 - If unable to eat and drink regularly, patients may be at risk of dehydration and renal function decline. They should be advised to temporarily stop the following medications and restart once able to eat/drink normally:
 - S = Sulfonylureas, other secretagogues
 - A = ACE inhibitors
 - D = Diuretics, direct renin inhibitors
 - M = Metformin
 - A = Angiotensin receptor blockers
 - N = NSAIDs (including over-the-counter products)
 - S = SGLT2 inhibitors
 - Avoid using over-the-counter products that can affect glucose levels to treat symptoms, such as cough syrups that contain sugar and decongestants.

Connecting with patients with diabetes proactively can help to ensure that they have a plan for managing their condition in the “new normal” that this pandemic has created.

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References

1. Carey IM, Critchly JA, DeWilde S, et al. Risk of infection in type 1 and type 2 diabetes compared with the general population: a matched cohort study. *Diabetes Care*. 2018;41:513-521.
2. Wu Z, McGoogan JM. Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: summary of a report of 72314 cases from the Chinese Center for Disease Control and Prevention. *JAMA*. 2020. Doi:10.1001/jama.2020.2648.
3. American Diabetes Association. How COVID-19 impacts people with diabetes. <https://www.diabetes.org/coronavirus-covid-19/how-coronavirus-impacts-people-with-diabetes>. Accessed May 13, 2020.
4. Zhou F, Yu T, Du R, et al. Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. *Lancet*. 2020;395:1054-62.
5. Grenard JL, Munjas BA, Adams JL, et al. Depression and medication adherence in the treatment of chronic diseases in the United States: a meta-analysis. *J Gen Intern Med*. 2011;26(10):1175-1182. Doi:10.1007/s11606-011-1704-y.
6. Lloyd C, Smith J, Weinger K. Stress and diabetes: A review of the links. *Diabetes Spectrum*. Apr 2005;18(2):121-127. Doi:10.2337/diaspect.18.2.121.
7. Hilliard ME, Yi-Frazier JP, Hessler D, Butler AM, Anderson BJ, Jaser S. Stress and A1c Among People with Diabetes Across the Lifespan. *Curr Diab Rep*. 2016;16(8):67. Doi:10.1007/s11892-016-0761-3.
8. Diabetes Canada. FAQ about COVID-19 and diabetes. May 13, 2020. <https://diabetes.ca/resources/tools---resources/faq-about-covid-19-and-diabetes>. Accessed May 13, 2020.
9. Hartmann-Boyce J, Morris E, Goyder C, et al. Managing diabetes during the COVID-19 pandemic. University of Oxford. Centre for Evidence-Based Medicine. April 8, 2020. <https://www.cebm.net/covid-19/managing-diabetes-during-the-covid-19-pandemic/>. Accessed May 14, 2020.
10. Gupta R, Ghosh A, Singh AK, et al. Clinical considerations for patients with diabetes in times of COVID-19 epidemic. *Diabetes Metab Syndrome: Clin Res Rev*. 2020;14(3):211-212.
11. Mor A, Dekkers OM, Nielsen JS, et al. Impact of Glycemic Control on Risk of Infections in Patients With Type 2 Diabetes: A Population-Based Cohort Study. *American Journal of Epidemiology*, Volume 186, Issue 2, 15 July 2017, Pages 227-236. <https://doi.org/10.1093/aje/kwx049>. Accessed May 14, 2020.
12. Hartmann-Boyce J, Mahtani KR. Supporting people with long-term conditions (LTCs) during national emergencies. University of Oxford. Centre for Evidence-Based Medicine. March 25, 2020. <https://www.cebm.net/covid-19/supporting-people-with-long-term-conditions-ltcs-during-national-emergencies/>. Accessed May 14, 2020.
13. Husein N, Chetty A. *Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada*: Influenza, pneumococcal, hepatitis B and herpes zoster vaccinations. *Can J Diabetes*. 2018. <http://guidelines.diabetes.ca/cpg/chapter19>. Accessed May 13, 2020.
14. Government of Canada. Pneumococcal vaccine: Canadian immunization guide. 2016. <https://www.canada.ca/en/public-health/services/publications/healthy-living/canadian-immunization-guide-part-4-active-vaccines/page-16-pneumococcal-vaccine.html>. Accessed May 17, 2020.
15. Sigal RJ, Armstrong MJ, Bacon SL, et al. *Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada*: Physical activity and diabetes. *Can J Diabetes*. 2018. <http://guidelines.diabetes.ca/browse/chapter10>. Accessed May 14, 2020.
16. Shovin CL, Moorthy K, Lees C. Covid-19: Home based exercise activities could help during self isolation. The BMJ Opinion (blog). March 16, 2020. <https://blogs.bmj.com/bmj/2020/03/16/covid-19-home-based-exercise-activities-could-help-during-self-isolation/>. Accessed May 13, 2020.
17. Diabetes Canada. Appendix 8: Sick-Day Medication List. 2018. <https://doi.org/10.1016/j.jcjd.2017.10.045>. Accessed May 13, 2020.