

Managing type 2 diabetes during COVID-19: a guide for primary care providers (version 1)

During the COVID-19 pandemic, we should be taking a virtual-first approach to diabetes care. The relative benefits and risks of an in-person versus virtual diabetes visit will depend on several factors, including an individual's capacity for using technology, the extent of their disease and local COVID-19 prevalence. **Regardless, most diabetes care and support can be delivered through virtual 'visits,' phone, video or secure messaging.** This resource is meant to supplement the Diabetes Canada guidelines by indicating ways to adapt care for type 2 diabetes during COVID-19. It may also be useful for people with pre-diabetes. See guidelines.diabetes.ca¹ for full guidelines and decision support tools for diabetes management.



Self-management is a core element of effective diabetes care and is essential during COVID-19. Two virtual resources to support self-management in people with diabetes and pre-diabetes include:

- **1-800 BANTING** (226-8464): People living with diabetes can call to speak with live diabetes educators
- [Canadian Diabetes Prevention Program](#)²: People living with pre-diabetes can self-enroll in this free, online, 1-year healthy behavior coaching program

Continue	Shift to	Delay
<ul style="list-style-type: none"> • In-person visits for patients with limited capacity to engage virtually • A1C testing every 3 months for patients with A1C \geq8% (Note: A1C target for most individuals remains $<$7%) • Assess medication adherence at every visit • Support self-management through education and personalized goals • Annual lab work for renal parameters (creatinine and urine ACR) 	<ul style="list-style-type: none"> • Conduct virtual visits when possible, based on disease severity and self-management capacity • Collect relevant information virtually before an in-person visit to minimize time in clinic • Ask a patient to self-monitor weight and blood pressure if possible • Support a patient's self-management with high-quality apps • Check cholesterol every 3 years if... the patient is on a stable statin dose, their LDL is on target and medication adherence is good • Cluster labwork to avoid repeated lab visits 	<ul style="list-style-type: none"> • If A1C $<$8%, delay frequency of A1C testing to a 6-9-month interval. Use smart self-monitoring of blood glucose (SMBG) as a proxy. • Delay the start of ACEi/ARB to 2 weeks before the patient's next scheduled labwork if using only for cardiovascular risk reduction • Defer screening ECGs (for those with no symptoms) • Defer retinopathy screening to a 3-year interval (for those with no previous eye disease and A1C $<$8%)



Schedule



Virtual visit (every 3-6M)

- A** Assess glycemic control using **A1C** and/or smart glucose self-monitoring, and assess for hypoglycemia.
- B** **BP** measured at home*
- C** Assess **cholesterol** medication adherence and the need for lipid testing
- D** Assess appropriateness of **drugs** for CVD risk reduction
- E** **Exercise**, healthy **eating**, and weight check
- S** Self-**screening** for feet using Ipswich Touch Test
- S** **Smoking** cessation
- S** **Self-management** support (provide apps, connect to resources, support medication adherence, extend prescription refills until next scheduled visit)



In-person visit (at least annually**)

- Review glucose meter and log results
- Foot examination (if concerns present on self-screening or unable to self-screen)
- BP machine calibration (if concerns with home BP)
- S** Shots/immunizations (unless can be completed at a pharmacy)



Lab testing and referrals

- A1C: Every 6-9M if $<$ 8%; every 3M if \geq 8%
- Cholesterol: Annually if above target; every 3Y if on stable statin dose, LDL on target, and med adherence is good
- eGFR, urine ACR: Annual
- ECG: Defer if no symptoms
- Retinopathy screening: Defer to a 3-year interval if no previous eye disease and A1C $<$ 8%

* If a patient is unable to measure BP at home, then measure BP in-person in the clinic, Q6-9 mo if BP is near target and stable

**Patients may require more frequent in-person visits depending on risk factor control and their capacity to engage in virtual care

ABCDEs: Management changes to consider during COVID-19

	COVID-19 considerations and provider resources	Resources for patients
<p>A</p> <p>A1C</p>	<ul style="list-style-type: none"> A1C every 3 months for those with A1C $\geq 8\%$ If A1C $< 8\%$, delay the frequency to a 6-9-month interval. Provider can use smart SMBG as a proxy. See: Self-Monitoring of Blood Glucose (SMBG) Recommendation Tool for Health-Care Providers (Diabetes Canada)³ Targets should still be individualized according to Diabetes Canada guidelines and remain the same during COVID-19 If the patient is on insulin, consider flash or continuous glucose monitoring 	<ul style="list-style-type: none"> Blood Glucose Log (Diabetes Canada)⁴
<p>B</p> <p>BP</p>	<ul style="list-style-type: none"> Educate and enable patients to self-monitor BP at home if possible. An office BP target of $< 130/80$ means a home BP target of $< 125/75$ See: Home Blood Pressure Monitoring: Treatment Targets (BHS)⁵ If the patient is unable to measure BP at home, then measure BP in-person in the clinic, Q6-9M if BP is near target and stable 	<ul style="list-style-type: none"> Home blood pressure measurement advice and log (Hypertension Canada)⁶ Recommended home blood pressure devices (Hypertension Canada)⁷
<p>C</p> <p>Cholesterol</p>	<ul style="list-style-type: none"> Start statin based on CV risk, regardless of blood cholesterol (e.g. if CVD, age ≥ 40 years or diabetes duration > 15 years with age ≥ 30 years, OR diabetes complications)^{8,9} Check cholesterol annually if above target. Check every 3 years if the patient is on a stable statin dose, their LDL is on target and medication adherence is good^{10,11} 	
<p>D</p> <p>Drugs for CVD risk reduction</p>	<ul style="list-style-type: none"> Start statin, ASA, SGLT2i/GLP1ra as per Diabetes Canada guidance for cardiovascular risk reduction If using only for cardiovascular risk reduction, delay the start of ACEi/ARB to 2 weeks before the patient's next scheduled labwork (to assess for Cr & K+) 	
<p>E</p> <p>Exercise and healthy eating</p>	<ul style="list-style-type: none"> Recommend resources for aerobic and resistance activity, while maintaining COVID-19 safety precautions Self-monitor weight at home Consider virtual diabetes education referral 	<ul style="list-style-type: none"> Resistance Exercise Videos (Diabetes Canada)¹² Workout videos - yoga, weights, and more (DiabetesStrong)¹³ 1-800 BANTING (226-8464): Call to speak with live diabetes educators
<p>S</p> <p>Screening: Cardiac</p>	<ul style="list-style-type: none"> Defer cardiac screening for those with no symptoms 	
<p>S</p> <p>Screening: Feet</p>	<ul style="list-style-type: none"> For patients with a caregiver, consider home foot screening using the Ipswich Touch Test¹⁴ Use a photo or video for virtual visual assessment of the feet. If the patient is unable to do foot screening at home, assess annually or sooner if there are concerns Educate the patient on 'danger signs' that require an in-person assessment 	<ul style="list-style-type: none"> Touch the toes test (Diabetes UK)¹⁵ Foot care checklist (Diabetes Canada)¹⁶
<p>S</p> <p>Screening: Kidney</p>	<ul style="list-style-type: none"> Continue to test for eGFR and ACR yearly, or more frequently if abnormal 	

ABCDEs: Management changes to consider during COVID-19 continued

	COVID-19 considerations and provider resources	Resources for patients
<p>S</p> <p>Screening: Retinopathy</p>	<ul style="list-style-type: none"> Retinopathy screening interval can be increased to every 3 years for those with no pre-existing eye disease and A1C <8%¹⁷ 	
<p>S</p> <p>Smoking cessation</p>	<ul style="list-style-type: none"> Support patients to quit smoking while considering challenges related to mental health distress during COVID-19 	<ul style="list-style-type: none"> Smoking, Vaping, and COVID-19: Frequently Asked Questions (QuitNow.ca)¹⁸ National toll-free quitline: 1-866-366-3667
<p>S</p> <p>Self-management</p>	<ul style="list-style-type: none"> Consider virtual diabetes education referral Recommend evidence-based programs, apps, or other supports for self-management Screen for and support individuals with increased socio-economic challenges. See: COVID-19: Social Care Guidance resource (CEP)¹⁹ Screen for and support individuals with worsening mental health and addictions Assess for and support medication adherence. Ask: "How many doses have you missed in the last week?". Extend medication prescription refills until the next scheduled diabetes review 	<ul style="list-style-type: none"> My Diabetes Care: Not just about blood sugars (Diabetes Canada)²⁰ Wellness Together Canada: resources, online support, and free individual counselling (Wellness Together Canada)²¹ Coping with COVID-19 (Anxiety Canada)²² Financial relief navigator COVID-19 (Prosper Canada)²³
<p>S</p> <p>Shots (Immunizations)</p>	<ul style="list-style-type: none"> Prioritize flu shots and the pneumococcal vaccination. See: Interim guidance on continuity of immunization programs during the COVID-19 pandemic (PHAC)²⁴ 	<ul style="list-style-type: none"> Learn about immunizations (Immunize Canada)²⁵
<p>S</p> <p>Safety</p>	<ul style="list-style-type: none"> Remind patients that they are at risk of COVID-19 and how to stay safe, including when travelling to the clinic Provide instructions on how to manage their diabetes if they do become sick with COVID-19 Consider a pre-visit questionnaire to minimize the time in clinic, either by secure messaging or e-forms that integrate with electronic records. See: Diabetes visit form (Ocean)²⁶ 	<ul style="list-style-type: none"> Stay Safe When You Have Diabetes and Are Sick or at Risk of Dehydration (Diabetes Canada)²⁷

Digital health apps can support self-management in some patients through data tracking and education. The decision to use an app should be based on the personal goals and preferences of each patient. When recommending apps for diabetes self-management, it's important to consider the following:



Most apps **focus on blood sugar management** and not other parameters such as BP, cholesterol, weight, or smoking



Many free apps include advertisements and **require paid app upgrades** for features such as data sharing with a primary care provider



Most apps have **complex privacy disclaimers** that imply the vendor can share patient data with others

Many glucometers have a specific app that can help patients store and share data.

Popular apps not linked to a specific glucometer include:

- Health2Sync
- MySugr

References

- [1] Diabetes Canada Clinical Practice Guidelines Expert Committee. Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada. Can J Diabetes. 2018;42(Suppl 1): S1-S325. Available from: guidelines.diabetes.ca
- [2] Canadian Diabetes Prevention Program [Internet]. [cited 2020 June 22]. Available from: www.lmc.ca/diabetesprevention
- [3] Self-Monitoring of Blood Glucose (SMBG) Recommendation Tool for Health-Care Providers [Internet]. Diabetes Canada; 2018. Available from: <http://guidelines.diabetes.ca/cpg/appendices/appendix5>
- [4] Blood glucose log [Internet]. Diabetes Canada; 2014. Available from: http://www.smbg.diabetes.ca/CDA_SMBG_Log.pdf
- [5] Home Blood Pressure Monitoring: Treatment Targets [Internet]. British Hypertension Society and National Institute for Health Research; 2017. Available from: https://bihsoc.org/wp-content/uploads/2017/09/Clinic_and_home_treatment_targets.pdf
- [6] Home Blood Pressure Log [Internet]. Hypertension Canada; 2017. Available from: https://hypertension.ca/wp-content/uploads/2017/11/HTC_BloodPressureLog_ENG_PREVIEW-1.pdf
- [7] Blood pressure devices: Hypertension Canada's Recommended BPM Devices Listing [Internet]. Hypertension Canada; 2018. Available from: <https://hypertension.ca/bpdevices>
- [8] Canadian Cardiovascular Society E-Guidelines [Internet]. Canadian Cardiovascular Society; 2018. Available from: <http://www.ccs.ca/eguidelines/Content/Topics/Dyslipidemia/4.1%20Statin%20Therapy.htm#41StatinTherapyConsideration>
- [9] Allan, G.M., Linblad, A.J., et al. Simplified lipid guidelines. Can Fam Physician. 2015 Oct;61(10):857-867. Available from: <https://www.cfp.ca/content/61/10/857>
- [10] Gitlin, Z., Marvel, F., Blumenthal, R.S., Martin, S.S. Statin Safety and Adverse Events [Internet]. American College of Cardiology; 2018. Available from: <https://www.acc.org/latest-in-cardiology/articles/2018/12/12/07/23/statin-safety-and-adverse-events>
- [11] FDA Drug Safety Communication: Important safety label changes to cholesterol-lowering statin drugs [Internet]. U.S. Food and Drug Administration; 2016. Available from: <https://www.fda.gov/drugs/drug-safety-and-availability/fda-drug-safety-communication-important-safety-label-changes-cholesterol-lowering-statin-drugs>
- [12] Resistance Exercise Videos [Internet]. Diabetes Canada; 2018. Available from: <http://guidelines.diabetes.ca/patient-videos/resistance-exercise-videos>
- [13] Workout Videos [Internet]. DiabetesStrong; 2019. Available from: <https://diabetesstrong.com/category/exercise/workout-videos/>
- [14] Rayman, G. Vas, P.R. et al. The Ipswich Touch Test: A simple and novel method to identify inpatients with diabetes at risk of foot ulceration. Diabetes Care 2011 Jul; 34(7): 1517-1518. Available from: <https://care.diabetesjournals.org/content/34/7/1517>
- [15] Touch the toes test [Internet]. Diabetes UK; 2012. Available from: <https://diabetes-resources-production.s3-eu-west-1.amazonaws.com/diabetes-storage/migration/pdf/Touch-the-toes-test.0812.pdf>
- [16] Diabetes Canada Clinical Practice Guidelines Expert Committee. Appendix 13: Diabetes and Foot Care: A Checklist. Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada. Can J Diabetes. 2018;42(Suppl 1): S1-S325. Available from: <http://guidelines.diabetes.ca/cpg/appendices/appendix13>
- [17] Thomas, R.L. Dunstan, F. et al. Incidence of diabetic retinopathy in people with type 2 diabetes mellitus attending the Diabetic Retinopathy Screening Service for Wales: retrospective analysis. BMJ 2012 Feb; 344.
- [18] Smoking, Vaping, and COVID-19: Frequently Asked Questions [Internet]. QuitNow.ca; 2020. Available from: <https://www.quitnow.ca/quitting/smoking-vaping-and-covid-19-faq>
- [19] Social Care Guidance [Internet]. Centre for Effective Practice, Upstream Lab, DFCM; 2020. Available from: <https://cep.health/clinical-products/covid-19-social-care-guidance/>
- [20] My Diabetes Care: Not just about blood sugars [Internet]. Diabetes Canada; 2018. Available from: <http://guidelines.diabetes.ca/docs/patient-resources/my-diabetes-care-not-just-about-blood-sugar.pdf>
- [21] Wellness Journey Toolkit [Internet]. Wellness Together Canada; 2020. Available from: <https://ca.portal.gs/>
- [22] Coping with COVID-19 [Internet]. Anxiety Canada; 2020. Available from: <https://www.anxietycanada.com/covid-19/>
- [23] Financial relief navigator: Learn about the help you can get to raise your income or lower your expenses during the COVID-19 pandemic. [Internet]. Prosper Canada; 2020. Available from: <https://financialreliefnav.prospercanada.org/en>
- [24] Interim guidance on continuity of immunization programs during the COVID-19 pandemic [Internet]. PHAC; 2020. Available from: <https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/interim-guidance-immunization-programs-during-covid-19-pandemic.html>
- [25] Immunize Canada [Internet]. Immunize Canada. Available from: <https://immunize.ca/>
- [26] Diabetes Visit form [Internet]. Ocean by CognisantMD. Available from: <https://ocean.cognisantmd.com/questionnaires/preview/QuestionnairePreview.html?ref=diabetes>
- [27] Stay Safe When You Have Diabetes and Are Sick or at Risk of Dehydration [Internet]. Diabetes Canada; 2018. Available from: <http://guidelines.diabetes.ca/docs/patient-resources/stay-safe-when-you-have-diabetes-and-sick-or-at-risk-of-dehydration.pdf>

This Resource was developed by the University of Toronto Department of Family and Community Medicine (DFCM) and the Centre for Effective Practice in collaboration with Diabetes Canada. Clinical leadership and expertise provided by:

- Tara Kiran, MD, MSc. St. Michael's Hospital, DFCM - University of Toronto
- Gray Moonen, MD, MSc, HBS. Toronto Western Hospital, DFCM - University of Toronto
- Onil Bhattacharyya, MD, PhD. Women's College Hospital, DFCM - University of Toronto
- Payal Agarwal, MD. Women's College Hospital, DFCM - University of Toronto
- Harpreet S. Bajaj, MD, MPH. Diabetes Canada
- James Kim, MD. University of Calgary, Diabetes Canada
- Noah Ivers, MD, PhD. Women's College Hospital, DFCM - University of Toronto

This Resource was developed for licensed health care professionals in Canada as a guide only and does not constitute medical or other professional advice. Primary care providers and other health care professionals are required to exercise their own clinical judgment in using this Resource.



Managing Diabetes During COVID-19 is a product of the DFCM, Centre for Effective Practice, and Diabetes Canada. Permission to use, copy, and distribute this material for all non-commercial and research purposes is granted, provided the above disclaimer, this paragraph and the following paragraphs, and appropriate citations appear in all copies, modifications, and distributions. Use of Managing Diabetes During COVID-19 for commercial purposes or any modifications of the Resource are subject to charge and use must be negotiated with the Centre for Effective Practice (Email: info@cep.health).

For statistical and bibliographic purposes, please notify the Centre for Effective Practice (info@cep.health) of any use or reprinting of the Resource. Please use the below citation when referencing the Resource:

Reprinted with Permission from the Centre for Effective Practice. (July 2020). Kiran, T., Moonen, G., Bhattacharyya, O., Agarwal, P., Bajaj, H.S., Kim, J., Ivers, N. Managing Diabetes During COVID-19: Ontario. Toronto: Centre for Effective Practice.

Developed By:



Centre
for Effective
Practice

