Gaps in Access to Diabetes Medications

Background

There are over 3.5 million people living with diabetes in Canada. Diabetes is a chronic, progressive disease that affects the body's ability to regulate the amount of glucose (sugar) in the blood. It has no cure, but can be managed through education, support, healthy behaviour interventions, and medications. People with type 1 diabetes require daily injections or infusions of insulin to sustain life. People with type 2 diabetes often rely on one or more diabetes medications (known as antihyperglycemic agents, or AHAs) to achieve target blood glucose levels and minimize the risk of complications associated with the condition. Diabetes management in many cases also requires the use of appropriate glucose monitoring devices to safely dose medications.

Diabetes Canada's 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada recommend the initiation of a basal-bolus insulin regimen (background insulin + meal time insulin) upon diagnosis in people with type 1 diabetes.[1] Insulin type, dosing schedule, and other treatment details are determined based on factors like general health, lifestyle, goals, and ability to self-manage and should be tailored to each patient.[1] For those with type 2 diabetes, metformin is typically recommended at the time of diagnosis or a few months thereafter if blood glucose targets are not achieved with healthy behavior interventions alone.[2] Other AHAs, including insulin as an option, should be added until blood glucose targets are reached. The choice of agent should be made with consideration to individual patient characteristics. For those with type 2 diabetes and clinical cardiovascular disease in whom blood glucose targets are not currently achieved:

- AHAs with demonstrated cardiovascular (CV) outcome benefit, such as a GLP1- RA class medication (e.g. liraglutide) and/or an SGLT2-i class medication (e.g. empagliflozin or canagliflozin), are recommended to reduce the risk of major cardiovascular events.[2]
- An AHA with demonstrated CV outcome benefit, such as an SGLT2-i class medication (e.g. empagliflozin or canagliflozin), is recommended to reduce the risk of heart failure hospitalization.[2]
- An AHA with demonstrated CV outcome benefit, such as an SGLT2-i class medication (e.g. empagliflozin or canagliflozin), is recommended to reduce the risk of progression of nephropathy (kidney damage).[2]

Challenges

Many Canadians rely on provincial drug programs to obtain the medications they need to manage their medical conditions. Public coverage of AHAs varies across Canada, and is based on factors such as age, income and treatment type. The availability of each of the AHAs and the prescribing rules on many of the public formularies is not in keeping with best practice guidelines (some of which are described above). This means people in certain provinces cannot quickly or easily access the most appropriate medications for their condition.

Cost is also a barrier to procuring AHAs and can affect people's ability to properly manage their diabetes. About 15 per cent of Canadians living with diabetes have no insurance to pay for their prescription medications, which can cost thousands of dollars out-of-pocket annually.[3] Some provincial drug plans reimburse the entire cost of AHAs for people who are eligible, and others provide little to no reimbursement. Private group plans offer different levels of reimbursement, but not all employers provide prescription drug coverage and it can be otherwise expensive or challenging for individuals with pre-existing health conditions to get. Co-pays and deductibles applied to medications on public and private plans may prohibit access if a person cannot afford to pay them. Many must choose between paying for food/ rent/utilities and obtaining medication. Some regularly cannot fill their prescriptions. Others take their AHAs less frequently

and/or at a lower dose than indicated to extend their prescription and save money.

Policy Implications

Several provincial governments either do not cover certain AHAs, or medications are restricted and require special permission to obtain, which can represent a significant access barrier for health-care providers and patients. Those who cannot afford their medications, are unable to take them as directed due to cost, or cannot get the most appropriate options in a timely way often have difficulty managing their disease. Uncontrolled diabetes can have very serious short and long-term health impacts and represents a burden to individuals, families, and Canadian society at large. High and unnecessary costs are incurred from lost productivity and elevated health-care system use due to diabetes and its many complications, including heart attack, stroke, kidney failure, blindness and amputation.

Recommendations

Diabetes Canada strongly advises the alignment of public and private drug plan policies with evidence-based guidelines to provide high quality treatment and optimize patient care in every jurisdiction across the country. Where they are a barrier to access, co-pays, deductibles and policies allowing only partial reimbursement of AHAs should be changed or eliminated. Additionally, people living with diabetes across Canada must have access to the education and supports they require that allow them to effectively self-manage their disease.

References

1. McGibbon A, Adams L, Ingersoll K et al. Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada: Glycemic Management in Adults with Type 1 Diabetes. Can J Diabetes 2018; 42 (Suppl. 1): S80-S87;
2. Lipscombe L, Booth G, Butalia S et al. Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada: Pharmacologic Glycemic Management of Type 2 Diabetes in Adults. Can J Diabetes 2018; 42 (Suppl. 1): S88-S103;
3. Canadian Diabetes Association. 2015 Report on Diabetes: Driving Change. Toronto, ON: CDA; 2015.

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Provinces	Gaps in Coverage for Those Covered Under a Public Plan		
	Insulin	AHAs for CV/Nephropathy Risk Reduction	Other AHAs
British Columbia	• partial reimbursement for rapid-acting and certain pre- mixed insulins • long-acting insulin covered for those who meet eligibility criteria and receive approval (full or partial reimbursement) • insulin glargine U-300 and insulin degludec not listed • Originator biologic insulin glargine delisted	• liraglutide not listed • canagliflozin not listed • empagliflozin covered only after treatment with metformin and a sulfonylurea	• linagliptin and saxagliptin covered for those who meet eligibility criteria and receive approval (full or partial reimbursement) • sitagliptin delisted (not available) • gliclazide covered for those who meet eligibility criteria and receive approval (full or partial reimbursement) • many combination medications not listed
Alberta	• insulin glargine U-300 and insulin degludec not listed • biphasic insulin aspart not listed • Originator biologic insulin glargine delisted	• liraglutide not listed • empagliflozin and canagliflozin covered for those who meet eligibility criteria and receive approval (full or partial reimbursement) • empagliflozin covered following treatment of Metformin	• linagliptin, sitagliptin and saxagliptin covered for those who meet eligibility criteria and receive approval (full or partial reimbursement) • many combination medications not listed or are restricted
Saskatchewan	• insulin aspart covered for those who meet eligibility criteria and receive approval (full or partial reimbursement) • insulin glargine U-300 not listed • biphasic insulin aspart, insulin lispro 25%/lispro protamine 75% and insulin lispro 50%/lispro protamine 50% not listed	• liraglutide not listed • empagliflozin and canagliflozin covered for those who meet eligibility criteria and receive approval (full or partial reimbursement) • empagliflozin covered following treatment of Metformin	• linagliptin, sitagliptin and saxagliptin covered for those who meet eligibility criteria and receive approval (full or partial reimbursement) • many combination medications not listed or are restricted
Manitoba	• insulin glargine U-300 not listed • biphasic insulin aspart and insulin lispro 50%/lispro protamine 50% not listed	• liraglutide not listed • empagliflozin and canagliflozin covered for those who meet eligibility criteria and receive approval (full or partial reimbursement) • empagliflozin covered following treatment of Metformin and Sulfonylurea	• linagliptin, sitagliptin and saxagliptin covered for those who meet eligibility criteria and receive approval (full or partial reimbursement) • many combination medications not listed or are restricted
Ontario	• insulin aspart covered for those who meet eligibility criteria and receive approval (full or partial reimbursement)	• liraglutide not listed	

New Brunswick	• insulin lispro and insulin detemir covered for those who meet eligibility criteria and receive approval (full or partial reimbursement) • insulin glargine covered for those who had a claim payed Nov/16-Oct/17 • insulin glargine U-300 not listed • biphasic insulin aspart, insulin lispro 25%/lispro protamine 75% and insulin lispro 50%/lispro protamine 50% not listed	• liraglutide not listed • empagliflozin and canagliflozin covered for those who meet eligibility criteria and receive approval (full or partial reimbursement)	• linagliptin, sitagliptin and saxagliptin covered for those who meet eligibility criteria and receive approval (full or partial reimbursement) • many combination medications not listed or are restricted
Nova Scotia	• insulin detemir and insulin glargine covered for those who meet eligibility criteria and receive approval (full or partial reimbursement) • insulin lispro covered for people under 18 years • insulin glargine U-300 not listed • biphasic insulin aspart, insulin lispro 25%/lispro protamine 75% and insulin lispro 50%/lispro protamine 50% not listed	• liraglutide not listed • empagliflozin and canagliflozin covered for those who meet eligibility criteria and receive approval (full or partial reimbursement)	• linagliptin, sitagliptin and saxagliptin covered for those who meet eligibility criteria and receive approval (full or partial reimbursement) • many combination medications not listed or are restricted
Prince Edward Island	• insulin detemir, insulin glargine U-300 and insulin glargine covered for those who meet eligibility criteria and receive approval (full or partial reimbursement) • insulin glargine U-300 and insulin degludec not listed • biphasic insulin aspart and insulin lispro 50%/lispro protamine 50% not listed	• liraglutide not listed • empagliflozin and canagliflozin covered for those who meet eligibility criteria and receive approval (full or partial reimbursement)	• linagliptin, sitagliptin and saxagliptin covered for those who meet eligibility criteria and receive approval (full or partial reimbursement) • many combination medications not listed or are restricted
Newfoundland & Labrador	• insulin lispro, insulin detemir and insulin glargine covered for those who meet eligibility criteria and receive approval (full or partial reimbursement) • insulin glargine U-300 not listed • biphasic insulin aspart, insulin lispro 25%/lispro protamine 75% and insulin lispro 50%/lispro protamine 50% not listed	• liraglutide not listed • emp agliflozin and canagliflozin covered for those who meet eligibility criteria and receive approval (full or partial reimbursement)	• linagliptin, sitagliptin and saxagliptin covered for those who meet eligibility criteria and receive approval (full or partial reimbursement) • many combination medications not listed or are restricted

NOTE: Cost of medications is a significant barrier to access. Though a medication may theoretically be available to a patient through a public plan, any co-pays and/or deductibles charged to the patient can prohibit access. Additionally, accessibility is limited for many patients when medications are only partially reimbursed by a public plan.

Legend	
AHA	Single-Source Brand Name
empagliflozin	Jardiance
liraglutide	Victoza
canagliflozin	Invokana
insulin glargine U-300	Toujeo
insulin degludec	Tresiba
biphasic insulin aspart	NovoMix 30
insulin aspart	NovoRapid
insulin lispro 25%/lispro protamine 75%	Humalog Mix25
insulin lispro 50%/lispro protamine 50%	Humalog Mix50
insulin lispro	Humalog
insulin detemir	Levemir
insulin glargine	Lantus
linagliptin	Trajenta
saxagliptin	Onglyza
sitagliptin	Januvia
gliclazide	Diamicron