

Prescribing Guideline for Continuous Subcutaneous Insulin Infusion (Insulin Pump) Therapy for Adult Patients with Type 1 Diabetes

Service Area: Chronic Disease > Diabetes

Guideline Number:

XX-XXX-XXX V01

Approved By: Shared Health Chief Medical Officer

Approved Date:

August 4, 2023

1.0 CLINICAL GUIDELINE STATEMENT

- 1.1 To establish prescribing guidelines for continuous subcutaneous insulin infusion, also called insulin pump, therapy for adult patients with [Type 1 Diabetes \(T1D\)](#).

2.0 GUIDELINE:

2.1 INCLUSION/EXCLUSION CRITERIA

This guideline is applicable to medical practitioners (Endocrinologists, Family Physicians and General Internists) who provide care using adult insulin pump therapy.

2.2 Guideline

To ensure the safe, effective and appropriate prescription of continuous subcutaneous insulin infusion (insulin pump) therapy, the following clinical criteria are recommended prior to an adult patient being provided with a provincially funded pump:

- 2.2.1 No more than one episode of unavoidable [Diabetic Ketoacidosis \(DKA\)](#) in the previous twelve months¹;
- 2.2.2 Appropriate education and assessment on the following requirements for patients seeking initial and ongoing use of continuous subcutaneous insulin infusion⁴. Patients should:
- 2.2.2.1 Demonstrate reasonable understanding of pump technology and appropriate expectations of pump therapy ^{1,2,3,4};
- 2.2.2.2 Display evidence of proficiency in carbohydrate counting ^{1,3,4};
- 2.2.2.3 Provide evidence of glucose monitoring at least four times per day or appropriate use of a continuous or advanced glucose monitor^{2,3,4};
- 2.2.2.4 Be aware of guidelines for sick day management and DKA prevention, including ketone testing ^{1,2,3,4};
- 2.2.2.5 Commit to a program of regular clinical follow-up with a health care provider^{2,3,4}.
- 2.2.3 Medical practitioners who want to access the resources of the Manitoba Adult Insulin Pump Program (MAIPP) must register* with the MAIPP (see [Appendix A](#)). Qualified for registration are medical practitioners (General Internists or Family Physician) with experience in Type 1 Diabetes management and have received training/education in insulin pump management
- *Endocrinologists are automatically registered*
- 2.2.4 It is recommended that adult patients that do not meet clinical criteria 2.2.1 to 2.2.2, but are never-the-less felt to be clinically appropriate for continuous subcutaneous insulin infusion therapy, be referred to the Manitoba Adult Insulin Pump Program to obtain a second opinion (consultation) to confirm the appropriateness of continuous subcutaneous insulin infusion therapy.

DISCLAIMER: Provincial Clinical Standards, Guidelines and Practice Tools are primarily concerned with patients and how they receive care and services and set out the responsibilities and expectations for the health care team in the delivery of clinical care. These resources do not replace, but are in addition to professional self-regulation and individual accountability for clinical judgment that are an integral part of health care.

3.0 APPLICATION:

3.1 For Patients

- Bring care closer to home for patients interested in insulin pump use.
- Assist patients with a clear understanding of the educational and assessment requirements for initial and ongoing insulin pump use.

3.2 For Clinicians

- Provide guidance for medical practitioners wishing to prescribe insulin pumps for appropriate patients.

3.3 For Health Service Organizations

- All SDOs in Manitoba will ensure that all SDO and private medical practitioners in their area are aware of the guideline.

4.0 DEFINITIONS:

Diabetic Ketoacidosis (DKA): is a diabetes emergency characterized by acidosis, ketosis and typically hyperglycemia.

Type 1 Diabetes (T1D): encompasses diabetes that is primarily a result of pancreatic beta cell destruction with consequent insulin deficiency, which is prone to ketoacidosis. This form includes cases due to an autoimmune process and those for which the etiology of beta cell destruction is unknown.

5.0 CONTACT:

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Key Supporting Documents/Resources:

The [Diabetes Canada Clinical Practice Guidelines \(CPG\)](#) are comprehensive, evidence-based guidelines intended to guide practice, inform general patterns of care, enhance diabetes prevention efforts, and reduce the burden of diabetes complications.

References:

- ¹McGibbon A, Adams L, Ingersoll K, Kader T, et al. 2018. "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". 42(Suppl 1):S80-S87.
- ²Clement M, Filteau P, Harvey B, Jin S, et al. Diabetes Canada. 2018. "2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada: Organization of Diabetes Care". Can J Diabetes. 24(Suppl1):S27-S35.
- ³Grunberger G, Abelseh JM, Bailey TS, et al. 2014. "Consensus Statement by the American Association of Clinical Endocrinologists/American College of Endocrinology Insulin Pump Management Task Force". Endocr Pract. 20:463–89.
- ⁴Peters AL, Ahmann AJ, Battelino T, et al. 2016. "Diabetes Technology-Continuous Subcutaneous Insulin Infusion Therapy and Continuous Glucose Monitoring in Adults: An Endocrine Society Clinical Practice Guideline". J Clin Endocrinol Metab.101:3922–37.

Document Review History

<u>Version #</u>	<u>Date</u>	<u>Reviewer</u>	<u>Action</u>
Provincial Clinical Standard (Former Document)			
1.0	April 20, 2022	Provincial Clinical Team, Chronic & Complex Medicine & Rehabilitation	ENDORSED
1.0	April 26, 2022	Provincial Clinical Leadership Team	APPROVED
2.0	Dec 22, 2022	Provincial Clinical Team, Chronic & Complex Medicine & Rehabilitation	ENDORSED
2.0	Dec 29, 2022	Provincial Clinical Leadership Team	APPROVED
3.0	Jun 27, 2023	Provincial Clinical Team, Chronic & Complex Medicine & Rehabilitation	ENDORSED
3.0	Jun 27, 2023	Provincial Clinical Leadership Team	APPROVED
Provincial Clinical Guideline (Current Document)			
1.0	Aug 4, 2023	Shared Health Chief Medical Officer	APPROVED

Appendix A - Process for Prescribers of Insulin Pump Therapy in the Province of Manitoba who want to Access the Resources and Become Affiliated with the Manitoba Adult Insulin Pump Program (MAIPP)

Application Process

Family physicians or general internal medicine specialists who want to access the resources of the MAIPP can do so in one of three ways.

1. Referral with Endocrinology consultation: patient is referred to MAIPP and is assigned a MAIPP affiliated Endocrinologist with expertise in pump therapy to participate in the selection and prescription of insulin pump therapy, follow up and optimization of therapy

2. Shared care model: A prescribing physician with an interested patient may seek consultation with an MAIPP physician (e.g. through the e-consult platform) for support in determining the appropriateness of therapy, selecting and prescribing an insulin pump. If deemed appropriate, the physician will prescribe the appropriate pump and MAIPP will assist with pump training and initiation of treatment in a shared care model in which the referring physician remains the primary responsible physician, but can reach out to MAIPP for advice at any time.

3. MAIPP Affiliated prescriber- those with comfort, familiarity and experience in insulin pump therapy may apply to become an MAIPP affiliated prescriber. Once approved, prescribers could refer patients to MAIPP for pump education and training. Interested parties are advised to follow the following step-wise process:

1. Apply in writing by contacting the MAIPP (Address: AC247 En-700 Elgin Avenue – Level 2, R3E 1B2, Winnipeg, MB – Fax: 204-940-2193. Email: InsulinPumpProgram@sharedhealthmb.ca)
2. The MAIPP will arrange an interview with the family physician/general internist via virtual/remote technology to confirm appropriate experience with Type 1 DM and knowledge of insulin pump therapy.

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3. The MAIPP will then grant access to the resources for three new insulin pump treatments. A MAIPP prescriber will be available to support the team/physician as required.
4. After 3 new insulin pump treatments have been implemented, the MAIPP will provide feedback to the family physician/general internist that :
 - they are a MAIPP affiliated prescriber of insulin pump therapy with access to MAIPP resources. OR
 - Based on concerns regarding adverse outcomes or potential for adverse outcomes, access to resources will be granted for another 3 new insulin pump treatments with a MAIPP prescriber available to support the team/physician; OR
 - Further education plus an additional interview is required before access to resources can be granted.