Alberta Health Services

Form Title **Diabetes in Pregnancy: Type 2 Diabetes Mellitus (T2 DM) or Gestational Diabetes Mellitus (GDM), Adult - Inpatient Order Set**

Form Number **21556Bond**

Alberta Health Services

Last Name *(Legal)*	First Name *(Legal)*
Preferred Name ☐ Last ☐ First	DOB *(dd-Mon-yyyy)*
PHN	ULI ☐ Same as PHN / MRN
Administrative Gender ☐ Male ☐ Female ☐Non-binary/Prefer not to disclose (X) ☐ Unknown	

Diabetes in Pregnancy: Type 2 Diabetes Mellitus (T2 DM) or Gestational Diabetes Mellitus (GDM), Adult - Inpatient Order Set

Select orders by replacing a (✓) in the associated box

Antepartum

If type of diabetes is unknown, treat patient as type 1 diabetes mellitus and consult endocrinologist or diabetes specialist.

Diet and Nutrition

☑ Adult Diet – Diabetic Pregnancy *(2000-2200 kcal)*

Monitoring and Patient Care

Glucose Meter Point of Care Treatment (POCT): Choose One

☐ Fasting and 1 hour after meal times, daily
☐ Fasting and 2 hours after meal times, daily

Optional Additional Testing

☐ 4 times per day 15 to 30 minutes before scheduled meals and at bedtime **AND** PRN for suspected hypoglycemia, daily
☐ At 0200 hours daily
☐ Every _____ hours

Blood Glucose (BG) Targets	
Fasting and Pre prandial	3.8 to 5.2 mmol/L
1 hour post prandial	Below 7.8 mmol/L
2 hour post prandial	Below 6.7 mmol/L
Hypoglycemia treatment	Below 3.8 mmol/L or symptomatic below 4.0 mmol/L or contact Most Responsible Health Provider (MRHP) for glucose below _____mmol/L **OR** if BG not easily corrected.
Hyperglycemia treatment	Contact MRHP for BG above 14.0 mmol/L **OR** above identified individualized target _____mmol/L

☐ Self-Managed Glucose Monitoring
Patient may use own home device such as home BG monitor, continuous glucose monitor or (rtCGM or isCGM) for the self management of diabetes care. AHS POCT BG monitoring still mandatory. Document home glucose results on the hospital chart.

☐ Notify MRHP – Antepartum Glucose Management
- BG greater than: _____ mmol/L
- BG less than: _____ mmol/L

☑ Contact Diabetes Care Provider or MRHP if patient is having hypoglycemic or hyperglycemic events that are not being easily addressed
☑ Initiate appropriate HYPO or HYPER glycemia procedure when BG targets are not met as per the AHS Glycemic Management Policy

Laboratory Investigation Routine

Chemistry

If patient has symptoms of Diabetic Ketoacidosis order Beta-Hydroxybutyrate if available. Activate if patient has BG greater than 18.0 mmol/L and/or symptoms of Diabetic Ketoacidosis. Symptoms include (but not limited to) polyuria, thirst, nausea/vomiting, abdominal pain, weakness, mental status change, recent weight loss, and coma.

☑ Beta-Hydroxybutyrate, Conditional, PRN

Urine

Serum Ketones (beta hydroxybutyrate) preferred over Urine Ketones for diagnosis of DKA

☐ Urinalysis
☐ Urinalysis POCT - Urine Ketones

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Antepartum

Medications

Diabetic Agents

Clinical Decision Support for Management of BG while on Steroids as per Diabetes Canada – may use based on clinical judgement. This was tested on Type 1 DM and may not be adequate for GDM or Type 2 DM.
Note: most patients will need more than these minimal increases.

Following the first dose of betamethasone

Day 1	Increase the night insulin doses by **25%**
Days 2 & 3	Increase **all** pre-steroid insulin doses by **40%**
Day 4	Increase **all** pre-steroid insulin doses by **20%**
Day 5	Increase **all** pre-steroid insulin doses by **10 to 20%**
Days 6 & 7	Gradually taper insulin doses to pre-steroid doses

☐ Basal Bolus Insulin Therapy - **Form 20889** *(individualized to the patient's needs)*

OR

☐ In-Hospital Orders for Self-Management of Insulin Pump - **Form 20102** *(if appropriate)*

☐ metFORMIN Tablet _____ mg, frequency _____

First dose today at _____*(HH:MM)*

Consults/Referrals

Inpatient Specialty Consults

- ☐ Nursing Communication: Notify on call diabetes specialist of patient's admission
- ☐ Diabetes Educator
- ☐ Obstetrics
- ☐ Neonatology
- ☐ Nutrition Services
- ☐ Obstetric Medicine/OBIM
- ☐ Endocrinology
- ☐ Internal Medicine

Request for Other Service

- ☐ Inpatient Consult *(other):* _____

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Intrapartum Type 2 Diabetes Mellitus (T2 DM) or Gestational Diabetes (GDM) Management

If type of diabetes is unknown, treat patient as type 1 diabetes mellitus and consult endocrinologist or diabetes specialist.

Patient Care

☐ Glucose Meter POCT – Prior to active labour, monitor fasting, 2 hours after meals **AND** PRN for suspected hypoglycemia

☑ Glucose Meter POCT– Initiate POCT glucose testing every one hour when NPO (sips of fluids/small snacks permitted) **AND** ANY of the following: 1) Active labour 2) Initiation of oxytocin induction 3) Before a scheduled or non-scheduled C-section. If POCT glucose result remains less than 7.0 mmol/L after 2 occurrences, reduce frequency of POCT monitoring to every 4 hours until delivery. If POCT result is greater than 7.0 mmol/L after 2 hours, notify MRHP, and refer to Table A: Insulin Initiation for Persistent Hyperglycemia Requiring IV Insulin Treatment in Type 2 DM and GDM (viewable in MAR). ONLY AHS POCT blood glucose device to be used to initiate or monitor IV insulin infusion.

☑ Once in active labour BG targets are 4.0-7.0 mmol/L during labour and delivery. Prior to active labour and patient still able to eat full meals, use usual antepartum management.

☑ Patient may have oral treatment for hypoglycemia as per **AHS Hypoglycemia Procedure** while NPO. Follow procedure for follow up care of patient while NPO. Contact Diabetes Care Provider or MRHP if patient is experiencing hypoglycemic or hyperglycemic events that are not being easily addressed.

☑ Placenta Delivery
When the Placenta delivers:
- **DISCONTINUE D10W** when patient is eating and drinking post-delivery
- **STOP insulin infusion** *(if applicable)*

☐ Notify MRHP – Intrapartum Glucose Management
- BG greater than: _____ mmol/L
- BG less than: _____ mmol/L

Medication

Diabetic Agents

IV Insulin Infusion During Labour. Continuous as needed if indicated by blood glucose value (refer to tables):

☑ D10W IV continuous infusion as per **Pregnancy BG POCT and Insulin Infusion Table T2DM** and **GDM**

☑ Insulin Regular (HumuLIN R®) (Add 1 mL of insulin regular 100 units/mL to 100 mL of NS)variable rate insulin infusion as per **Pregnancy BG POCT and Insulin Infusion Tables T2 DM and GDM** if required as per Table A

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Diabetes in Pregnancy: Type 2 Diabetes Mellitus (T2 DM) or Gestational Diabetes Mellitus (GDM), Adult - Inpatient Order Set

Select orders by replacing a (✓) in the associated box

Postpartum Type 2 Diabetes Mellitus (T2 DM)

Diet and Nutrition

☑ Adult Diet – Diabetic Pregnancy *(2000-2200 kcal)*

Patient Care

☑ Glucose Meter POCT – 4 times per day 15 to 30 minutes before scheduled meals and at bedtime **AND** PRN for suspected hypoglycemia

Postpartum BG targets 5.0 – 10.0 mmol/L or individualized identified targets.

☐ Self-Managed Glucose Monitoring
Patient may use own home device such as home BG monitor, continuous glucose monitor (rtCGM or isCGM) for the self management of diabetes care. AHS POCT Blood Glucose monitoring still mandatory. Document home glucose results on the hospital chart.

☐ Notify MRHP, Postpartum Glucose Targets
Refer to AHS Glycemic Management Policy for treatment of hypoglycemia (below 4.0 mmol/L) and hyperglycemia (above 18.0 mmol/L)

- BG greater than _____ mmol/L
- BG less than _____ mmol/L
- Other _____

Medications

Pre-pregnancy diabetes medication, adjusted as required. Metformin, Glyburide and insulin are compatible with breastfeeding.

Diabetic Agents

☐ Basal Bolus Insulin Therapy **Form 20889** *(individualized to the patient's needs)*

OR

☐ In-Hospital Orders for Self-Management of Insulin Pump **Form 20102** *(if appropriate)*

☐ metFORMIN Tablet _____ mg, frequency _____

First dose today at _____

☐ glyBURIDE Tablet _____ mg BID

First dose today at _____

☐ Other: _____

Discharge Instructions / Follow Up

☐ Family Practice Physician: Follow up in _____ weeks
☐ Diabetes in Pregnancy Clinic: Follow up in _____ weeks
☐ Internal Medicine: Follow up in _____ weeks
☐ Endocrinologist: Follow up in _____ weeks
☐ Other: _____

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Postpartum Gestational Diabetes Mellitus (GDM)

Diet and Nutrition

☑ Adult Diet – Diabetic Pregnancy *(2000-2200 kcal)*

Patient Care

Gestational Diabetes resolves postpartum in most women. If hyperglycemia persists, evaluate for Type 2 Diabetes.

☐ Glucose Meter POCT – 4 times daily 15-30 minutes before meals and at bedtime, for 24 hours postpartum.

☐ If any value of POCT BG is greater than 7.0 mmol/L fasting or pre-meals continue POCT BG monitoring 4 times daily 15-30 minutes before meals and at bedtime. Call diabetes care provider or MRHP

Discharge Instructions / Follow Up

☐ Discharge Follow Up – Provide Lab Requisition for 2 hour Oral Glucose Tolerance Test to be done 6 weeks postpartum

☐ Discharge Follow Up – Family Practice Physician: Follow up in _____ weeks

☐ Discharge Follow Up – Other: _____

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Select orders by replacing a (✓) in the associated box

If NPO but NOT in Labour for Diabetes Medication Management for Type 2 Diabetes Mellitus (DM) or Gestational Diabetes Mellitus (GDM) ***Recommendations for management are to adjust insulin orders, or oral medications using one of the options below:***

Adjust insulin orders or oral medication as follows:

- Basal Bolus Insulin Therapy - **Form 20889** (*individualized to the patient's needs)*

OR

☐ HOLD Metformin

OR

☐ Insulin Regular (HumuLIN R®) (Add 1 mL of insulin regular 100 units/mL to 100 mL of NS) variable rate insulin infusion as per Table **Pregnancy BG POCT** and **Insulin Infusion Table T2DM or GDM**

☐ D10W IV continuous infusion as per **Pregnancy BG POCT** and **Insulin Infusion Table T2DM or GDM**

☐ Glucose Meter POCT – every 1 hour while on IV insulin infusion. Only AHS POCT Blood Glucose Monitor to be used to initiate and monitor infusion.

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Table A: Insulin Initiation for Persistent Hyperglycemia Requiring IV Insulin Treatment in Type 2 DM & GDM	
POCT Glucose Reading (mmol/L)	**Insulin and Dextrose Instructions**
Less than or equal to 3.9	DO NOT start insulin Follow HYPOglycemia procedure, Notify MRHP
4.0 - 7.0	DO NOT start insulin DO NOT start D10W
7.1 - 8.0	START insulin at 0.5 unit/hour START D10W at 50 mL/hour
8.1 - 12.0	START insulin at 1 unit/hour START D10W at 50 mL/hour
Greater than 12.0	START insulin at 2 unit/hour DO NOT start D10W
Table B: Insulin/D10W Rate Adjustment (USE TABLE C if POCT blood glucose drops by more than 2 mmol/L in one hour)	
POCT Glucose Reading (mmol/L)	**Insulin and Dextrose Instructions**
Less than or equal to 3.0	STOP insulin infusion. Follow HYPOglycemia procedure
3.1 - 3.9	Decrease insulin rate by 1 unit/hour OR STOP if insulin rate is 1 unit/hour or less Follow HYPOglycemia procedure
4.0 – 7.0	Do not change insulin rate CONTINUE (or START) D10W at 50 mL/hour
7.1 – 8.0	INCREASE insulin rate by 0.5 unit/hour CONTINUE (or START) D10W at 50 mL/hour
8.1 - 9.0	INCREASE insulin rate by 1 unit/hour CONTINUE (or START) D10W at 50 mL/hour
9.1 - 10.0	INCREASE insulin rate by 1.5 unit/hour CONTINUE (or START) D10W at 50 mL/hour
10.1 – 12.0	INCREASE insulin rate by 2 unit/hour CONTINUE (or START) D10W at 50 mL/hour
Greater than 12.0	INCREASE insulin rate by 2 unit/hour STOP D10W for 1 hour
If insulin infusion is stopped, restart at 0.5 units/hour when POCT glucose rises to greater than 4.5 mmol/L.	
Table C Adjustment: Infusion rate when POCT blood glucose DROPS by 2 mmol/L or more in one hour	
POCT Glucose Reading (mmol/L)	**Insulin and Dextrose Instructions**
Less than or equal to 3.9	STOP Insulin Infusion Follow HYPOglycemia procedure
4.0 - 5.0	STOP Insulin Infusion INCREASE D10W to 100 mL/hour for 1 hour
Greater than 5.0	If previous insulin rate is less than or equal to 2 units/hour, STOP insulin infusion. If previous insulin rate more than 2 units/hour - REDUCE insulin rate to 1 unit/hour INCREASE D10W to 100 mL/hour for 1 hour
If insulin infusion is stopped, restart at 0.5 units/hour when POCT glucose rises to greater than 4.5 mmol/L.	