

# Waterloo-Wellington Diabetes and Pregnancy Clinical Pathway

This pathway was created to support a consistent standard of care for all women with diabetes and pregnancy throughout the region. It recognizes a multidisciplinary approach and offers details of care and education from preconception to postpartum, based on the 2013 CDA Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada. This pathway is to be used as a guideline and does not replace clinical judgment.

Type:	Type 1 Diabetes	Type 2 Diabetes	Gestational Diabetes	Repeat Gestational Diabetes/High Risk for GDM
<b>Stage:</b>	<b>Preconception (3-6 months preconception)</b>			
<b>Activities:</b>	<p><b>Referrals</b></p> <p>Referral to Diabetes Central Intake (1-855-DIA-BETS)* Ophthalmologic assessment (Retinal Eye Exam) Consider referral to nephrologist if: • serum creatinine <math>\geq 100 \mu\text{mol/L}</math> or • eGFR <math>\leq 60 \text{ mL/min}</math> or • urine ACR <math>\geq 2.0 \text{ mg/mmol}</math> • eGFR 60-100 mL/min requires close monitoring</p> <p><b>Tests</b></p> <p>A1C, FBS, creatinine, eGFR, uric acid, ALT, AST, bilirubin, thiamine, vitamin B12, ferritin, CBC Urine ACR TSH (Target 0.1-3.0 mIU/L) • If above target order free T4 + thyroid antibodies • If below target order free T3 + free T4 If abnormal thyroid, repeat tests every 4 weeks Lipid profile Lab/meter correlation Self-monitoring of blood glucose ac meals and hs (more frequently if needed)</p> <p><b>Targets</b></p> <p>A1C <math>\leq 7\%</math> (or as close to normal as can safely be achieved) BP <math>&lt; 130/80</math> BG <math>&lt; 4.7 \text{ mmol/L}</math> FPG or preprandial PG 5-10 mmol/L 2 hours postprandial PG</p> <p><b>Treatment</b></p> <p>Encourage reliable contraception until optimal glycemic control Basal bolus insulin or insulin pump Folic Acid 5 mg OD, Vitamin D 4000 IU Stop ACE inhibitors and ARBs (contraindication may be considered in case of significant diabetic nephropathy to prevent progression, but must be stopped at dx of pregnancy) Consider CCBs, BB, labetalol, and methyldopa Stop Statins, Fibrates and Niacin Identify hypoglycemia unawareness and Rx for Glucagon</p> <p><b>Teach</b></p> <p>Encourage optimal control 3 months prior to conception Encourage healthy lifestyle including nutrition and exercise Review self-care practices Assess carb/insulin ratio knowledge and ability Discuss: • Self-monitoring of BG QID (ac meals and hs) • Importance of maintaining glycemic targets • Importance of regular visits • Good glycemic control Assess the need for social/financial support during pregnancy</p> <p><b>Frequency of Visits</b></p> <p>Monthly</p> <p><b>Supporting Documents</b></p> <p>*A Record of My Journey with Pregnancy and Diabetes*</p>	<p><b>Referrals</b></p> <p>Referral to Diabetes Central Intake (1-855-DIA-BETS)* Ophthalmologic assessment (Retinal Eye Exam) Consider referral to nephrologist if: • serum creatinine <math>\geq 100 \mu\text{mol/L}</math> or • eGFR <math>\leq 60 \text{ mL/min}</math> or • urine ACR <math>\geq 2.0 \text{ mg/mmol}</math> • eGFR 60-100 mL/min requires close monitoring</p> <p><b>Tests</b></p> <p>A1C, FBS, creatinine, eGFR, uric acid, ALT, AST, bilirubin, thiamine, vitamin B12, ferritin, CBC Urine ACR TSH (Target 0.1-3.0 mIU/L) • If above target order free T4 + thyroid antibodies • If below target order free T3 + free T4 If abnormal thyroid, repeat tests every 4 weeks Lipid profile Lab/meter correlation Self-monitoring of blood glucose ac meals and hs (more frequently if needed)</p> <p><b>Targets</b></p> <p>A1C <math>\leq 7\%</math> (or as close to normal as can safely be achieved) BP <math>&lt; 130/80</math> BG <math>&lt; 4.7 \text{ mmol/L}</math> FPG or preprandial PG 5-10 mmol/L 2 hours postprandial PG</p> <p><b>Treatment</b></p> <p>Encourage reliable contraception until optimal glycemic control Folic Acid 5 mg OD, Vitamin D 4000 IU Stop oral diabetes agents Initiate insulin therapy Calculate Total Daily Dose 0.3-0.5 units/kg 40% Basal (Detemir, Glargine, NPH) at bedtime 60% Bolus divided between 2 meals (Aspart, Lispro) *this is a starting dose, increase aggressively to reach target Maintain Metformin if PCOS Stop ACE inhibitors and ARBs Consider CCBs, BB, labetalol, and methyldopa Stop Statins, Fibrates and Niacin</p> <p><b>Teach</b></p> <p>Encourage optimal control 3 months prior to conception Encourage healthy lifestyle including nutrition and importance of exercise in reducing insulin resistance Review current therapy and reason for switching to insulin therapy for the duration of their pregnancy Teach insulin administration Assess the need for social/financial support during pregnancy</p> <p><b>Frequency of Visits</b></p> <p>Monthly</p> <p><b>Supporting Documents</b></p> <p>*A Record of My Journey with Pregnancy and Diabetes*</p>	<p><b>Referrals</b></p> <p>Referral to Diabetes Central Intake (1-855-DIA-BETS)* Ophthalmologic assessment (Retinal Eye Exam) Consider referral to nephrologist if: • serum creatinine <math>\geq 100 \mu\text{mol/L}</math> or • eGFR <math>\leq 60 \text{ mL/min}</math> or • urine ACR <math>\geq 2.0 \text{ mg/mmol}</math> • eGFR 60-100 mL/min requires close monitoring</p> <p><b>Tests</b></p> <p>A1C, FBS, creatinine, eGFR, uric acid, ALT, AST, bilirubin, thiamine, vitamin B12, ferritin, CBC Urine ACR TSH (Target 0.1-3.0 mIU/L) • If above target order free T4 + thyroid antibodies • If below target order free T3 + free T4 If abnormal thyroid, repeat tests every 4 weeks Lipid profile Lab/meter correlation Self-monitoring of blood glucose ac meals and hs (more frequently if needed)</p> <p><b>Targets</b></p> <p>A1C <math>\leq 7\%</math> (or as close to normal as can safely be achieved) BP <math>&lt; 130/80</math> BG <math>&lt; 4.7 \text{ mmol/L}</math> FPG or preprandial PG 5-10 mmol/L 2 hours postprandial PG</p> <p><b>Treatment</b></p> <p>Encourage reliable contraception until optimal glycemic control Folic Acid 5 mg OD, Vitamin D 4000 IU Stop ACE inhibitors and ARBs (contraindication may be considered in case of significant diabetic nephropathy to prevent progression, but must be stopped at dx of pregnancy) Consider CCBs, BB, labetalol, and methyldopa Stop Statins, Fibrates and Niacin Identify hypoglycemia unawareness and Rx for Glucagon</p> <p><b>Teach</b></p> <p>Encourage optimal control 3 months prior to conception Encourage healthy lifestyle including nutrition and importance of exercise in reducing insulin resistance Review current therapy and reason for switching to insulin therapy for the duration of their pregnancy Teach insulin administration Assess the need for social/financial support during pregnancy</p> <p><b>Frequency of Visits</b></p> <p>Monthly</p> <p><b>Supporting Documents</b></p> <p>*A Record of My Journey with Pregnancy and Diabetes*</p>	<p><b>Referrals</b></p> <p>Referral to Diabetes Central Intake (1-855-DIA-BETS)* if diagnosed with prediabetes, or at risk for diabetes</p> <p><b>Tests</b></p> <p>A1C, FBS, creatinine, uric acid, ALT, AST, bilirubin, thiamine, vitamin B12, ferritin, CBC TSH (Target 0.1-3.0 mIU/L) • If above target order free T4 + thyroid antibodies • If below target order free T3 + free T4 If abnormal thyroid, repeat tests every 4 weeks 2 hour 75 gm OGTT (high risk women) If dx of diabetes is confirmed if: FPG <math>\geq 7.0 \text{ mmol/L}</math> 2HPG <math>\geq 11.1 \text{ mmol/L}</math> A1C <math>\geq 6.5\%</math></p> <p><b>Targets</b></p> <p>A1C <math>\leq 5.5\%</math> Normal BP FBS <math>&lt; 5.8 \text{ mmol/L}</math> 2hr BG <math>&lt; 7.8 \text{ mmol/L}</math></p> <p><b>Treatment</b></p> <p>Folic Acid 5 mg OD, Vitamin D 4000 IU</p> <p><b>Teach</b></p> <p>Reinforce healthy lifestyle including nutrition and importance of exercise in reducing insulin resistance Encourage healthy weight reduction if BMI <math>&gt; 29</math> Risks for Type 2 diabetes</p> <p><b>Frequency of Visits</b></p> <p>As needed</p> <p><b>Supporting Documents</b></p> <p>As needed</p>
<b>Stage:</b>	<b>1<sup>st</sup> Trimester (1-12 weeks)</b>			
<b>Activities:</b>	<p><b>Referrals</b></p> <p>If not already done: Referral to Diabetes Central Intake (1-855-DIA-BETS)* Obstetrician Consider referral to nephrologist if: • serum creatinine <math>\geq 100 \mu\text{mol/L}</math> or • urine ACR <math>\geq 2.0 \text{ mg/mmol}</math> • Pre-conception eGFR <math>\leq 60 \text{ mL/min}</math></p> <p><b>Tests</b></p> <p>Confirm viability of pregnancy and gestational age A1C, FBS, creatinine, uric acid, ALT, AST, bilirubin, triglycerides, thiamine, vitamin B12, ferritin, CBC Urine ACR TSH (Target 0.1-2.5 mIU/L) • If above target order free T4 + thyroid antibodies • If below target order free T3 + free T4 If abnormal thyroid, repeat tests every 4 weeks Repeat retinal eye exam Self-monitoring of blood glucose ac and 1 hr pc meals, hs and occasionally during night Continuous glucose monitoring may be considered</p> <p><b>Targets</b></p> <p>A1C <math>\leq 7\%</math> (or as close to normal as can safely be achieved) BP <math>&lt; 130/80</math> FBS and Preprandial BG <math>&lt; 5.3 \text{ mmol/L}</math> 1 hr postprandial BG <math>&lt; 7.8 \text{ mmol/L}</math> 2 hr postprandial BG <math>&lt; 6.7 \text{ mmol/L}</math> (Be prepared to raise these targets if needed because of the increased risk of severe hypoglycemia)</p> <p><b>Treatment</b></p> <p>Folic acid 5 mg until 12 weeks, Prenatal Vitamins, Vitamin D 4000 IU Basal Bolus Insulin injections or Insulin Pump</p> <p><b>Teach</b></p> <p>Explain changing insulin requirements during pregnancy and high risk of hypoglycemia during 1st trimester Identify possible hypoglycemia unawareness Teach partner glucagon Ketone testing Assess the need for social/financial support during pregnancy</p> <p><b>Frequency of Visits</b></p> <p>Monthly</p> <p><b>Supporting Documents</b></p> <p>*A Record of My Journey with Pregnancy and Diabetes*</p>	<p><b>Referrals</b></p> <p>If not already done: Referral to Diabetes Central Intake (1-855-DIA-BETS)* Obstetrician Consider referral to nephrologist if: • serum creatinine <math>\geq 100 \mu\text{mol/L}</math> or • urine ACR <math>\geq 2.0 \text{ mg/mmol}</math> • Pre-conception eGFR <math>\leq 60 \text{ mL/min}</math></p> <p><b>Tests</b></p> <p>Confirm viability of pregnancy and gestational age A1C, FBS, creatinine, uric acid, ALT, AST, bilirubin, triglycerides, thiamine, vitamin B12, ferritin, CBC Urine ACR TSH (Target 0.1-2.5 mIU/L) • If above target order free T4 + thyroid antibodies • If below target order free T3 + free T4 If abnormal thyroid, repeat tests every 4 weeks Repeat retinal eye exam Self-monitoring of blood glucose ac and 1 hr pc meals, hs and occasionally during night Continuous glucose monitoring may be considered</p> <p><b>Targets</b></p> <p>A1C <math>\leq 7\%</math> (or as close to normal as can safely be achieved) BP <math>&lt; 130/80</math> FBS and Preprandial BG <math>&lt; 5.3 \text{ mmol/L}</math> 1 hr postprandial BG <math>&lt; 7.8 \text{ mmol/L}</math> 2 hr postprandial BG <math>&lt; 6.7 \text{ mmol/L}</math></p> <p><b>Treatment</b></p> <p>Folic acid 5 mg until 12 weeks, Prenatal Vitamins, Vitamin D 4000 IU Basal Bolus Insulin injections or Insulin Pump</p> <p><b>Teach</b></p> <p>Explain increasing insulin resistance during pregnancy requiring frequent adjustments Reinforce healthy lifestyle including nutrition and exercise Importance of maintaining glycemic targets Importance of regular visits Review current therapy and initiate insulin therapy if not already done Assess the need for social/financial support during pregnancy</p> <p><b>Frequency of Visits</b></p> <p>Monthly</p> <p><b>Supporting Documents</b></p> <p>*A Record of My Journey with Pregnancy and Diabetes*</p>	<p><b>Referrals</b></p> <p>Referral to Diabetes Central Intake (1-855-DIA-BETS)* at 10 to 12 weeks gestation for women with previous gestational diabetes</p> <p><b>Tests</b></p> <p>2-hour 75g OGTT at 16-18 weeks if high risk and not previously done • Dx of GDM with one elevated value FPG <math>\geq 5.1 \text{ mmol/L}</math> 1HPG <math>\geq 10.0 \text{ mmol/L}</math> 2HPG <math>\geq 8.5 \text{ mmol/L}</math></p> <p>A1C, FBS, creatinine, uric acid, ALT, AST, bilirubin, triglycerides, thiamine, vitamin B12, ferritin, CBC TSH (Target 0.1-2.5 mIU/L) • If above target order free T4 + thyroid antibodies • If below target order free T3 + free T4 If abnormal thyroid, repeat tests every 4 weeks</p> <p><b>Targets</b></p> <p>A1C <math>\leq 5.5\%</math> Normal BP FBS and Preprandial BG <math>&lt; 5.3 \text{ mmol/L}</math> 1 hr postprandial BG <math>&lt; 7.8 \text{ mmol/L}</math> 2 hr postprandial BG <math>&lt; 6.7 \text{ mmol/L}</math></p> <p><b>Treatment</b></p> <p>Folic acid 5 mg until 12 weeks Prenatal Vitamins, Vitamin D 4000 IU</p> <p><b>Teach</b></p> <p>Explain risk of developing GDM if previously diagnosed Review increasing insulin resistance during pregnancy and importance of occasional monitoring early in pregnancy Reinforce healthy lifestyle including nutrition and exercise Assess the need for social/financial support during pregnancy</p> <p><b>Frequency of Visits</b></p> <p>As required</p> <p><b>Supporting Documents</b></p> <p>*A Record of My Journey with Pregnancy and Diabetes*</p>	
<b>Stage:</b>	<b>2<sup>nd</sup> Trimester (13-27 weeks)</b>			
<b>Activities:</b>	<p><b>Referrals</b></p> <p>Consider referral to nephrologist if: • serum creatinine <math>\geq 100 \mu\text{mol/L}</math> or • urine ACR <math>\geq 2.0 \text{ mg/mmol}</math></p> <p><b>Tests</b></p> <p>Repeat retinal eye exam if required A1C, creatinine Urine ACR TSH (Target 0.1-2.5 mIU/L until 20 weeks 0.2-3.0 mIU/L after 20 weeks) • If above target order free T4 + thyroid antibodies • If below target order free T3 + free T4 If abnormal thyroid, repeat tests every 4 weeks Self-monitoring of blood glucose ac and 1 hr pc meals, hs and occasionally during night</p> <p><b>Targets</b></p> <p>A1C <math>\leq 7\%</math> (or as close to normal as can safely be achieved) BP <math>&lt; 130/80</math> FBS and Preprandial BG <math>&lt; 5.3 \text{ mmol/L}</math> 1 hr postprandial BG <math>&lt; 7.8 \text{ mmol/L}</math> 2 hr postprandial BG <math>&lt; 6.7 \text{ mmol/L}</math> (Be prepared to raise these targets if needed because of the increased risk of severe hypoglycemia)</p> <p><b>Treatment</b></p> <p>Prenatal Vitamins with 0.4 to 1.0 mg Folic Acid, Vitamin D 4000 IU Basal Bolus Insulin injections or Insulin Pump</p> <p><b>Teach</b></p> <p>Review changing insulin requirements Review hypoglycemia treatment Advice on where to have birth eq. Level 2 or 3 nursery</p> <p><b>Frequency of Visits</b></p> <p>Every 2 weeks Consider more frequent visits for those with poor glycemic control and/or hypertension</p> <p><b>Supporting Documents</b></p> <p>*A Record of My Journey with Pregnancy and Diabetes*</p>	<p><b>Referrals</b></p> <p>Obstetrician if not already done Consider referral to nephrologist if: • serum creatinine <math>\geq 100 \mu\text{mol/L}</math> or • urine ACR <math>\geq 2.0 \text{ mg/mmol}</math></p> <p><b>Tests</b></p> <p>Repeat retinal eye exam if required A1C, creatinine Urine ACR TSH (Target 0.1-2.5 mIU/L until 20 weeks 0.2-3.0 mIU/L after 20 weeks) • If above target order free T4 + thyroid antibodies • If below target order free T3 + free T4 If abnormal thyroid, repeat tests every 4 weeks Self-monitoring of blood glucose ac and 1 hr pc meals and hs and occasionally during night (if on insulin)</p> <p><b>Targets</b></p> <p>A1C <math>\leq 7\%</math> (or as close to normal as can safely be achieved) BP <math>&lt; 130/80</math> FBS and Preprandial BG <math>&lt; 5.3 \text{ mmol/L}</math> 1 hr postprandial BG <math>&lt; 7.8 \text{ mmol/L}</math> 2 hr postprandial BG <math>&lt; 6.7 \text{ mmol/L}</math></p> <p><b>Treatment</b></p> <p>Prenatal Vitamins with 0.4 to 1.0 mg Folic Acid, Vitamin D 4000 IU Basal Bolus Insulin injections or Insulin Pump</p> <p><b>Teach</b></p> <p>Review and explain increasing insulin requirements Review hypoglycemia treatment Advice on where to have birth eq. Level 2 or 3 nursery</p> <p><b>Frequency of Visits</b></p> <p>Every 2 weeks Consider more frequent visits for those with poor glycemic control and/or hypertension</p> <p><b>Supporting Documents</b></p> <p>*A Record of My Journey with Pregnancy and Diabetes*</p>	<p><b>Referrals</b></p> <p>If diagnosed with GDM: Referral to Diabetes Central Intake (1-855-DIA-BETS)*</p> <p><b>Tests</b></p> <p>24-28 weeks: 75 gm OGTT test at 24-28 weeks Dx of GDM with one elevated value FPG <math>\geq 5.1 \text{ mmol/L}</math> 1h PG <math>\geq 10.0 \text{ mmol/L}</math> 2h PG <math>\geq 8.5 \text{ mmol/L}</math></p> <p>Self-monitoring of blood glucose fasting and 1 hr pc meals If on insulin, self-monitoring of blood glucose ac and 1 hr pc meals Ketone testing every morning TSH (Target 0.1-2.5 mIU/L until 20 weeks 0.2-3.0 mIU/L after 20 weeks) • If above target order free T4 + thyroid antibodies • If below target order free T3 + free T4 If abnormal thyroid, repeat tests every 4 weeks</p> <p><b>Targets</b></p> <p>BP <math>&lt; 130/80</math> FBS and Preprandial BG <math>&lt; 5.3 \text{ mmol/L}</math> 1 hr postprandial BG <math>&lt; 7.8 \text{ mmol/L}</math> 2 hr postprandial BG <math>&lt; 6.7 \text{ mmol/L}</math></p> <p><b>Treatment</b></p> <p>Prenatal Vitamins with 0.4 to 1.0 mg Folic Acid, Vitamin D 4000 IU Initiate Insulin therapy if: • Fasting Blood glucose above target • Initiate 4-5 units basal insulin at bedtime (NPH, Detemir, Glargine) • Postprandial blood glucose above target • Initiate 2-4 units rapid (Lispro, Aspart) before the meal If insulin therapy refused, glyburide or metformin may be considered</p> <p><b>Teach</b></p> <p>Pathophysiology of GDM Importance of nutrition, exercise, monitoring Review changing insulin requirements Review hypoglycemia treatment if on insulin</p> <p><b>Frequency of Visits</b></p> <p>Every 2 weeks Consider more frequent in those with poor glycemic control, and/or hypertension</p> <p><b>Supporting Documents</b></p> <p>*A Record of My Journey with Pregnancy and Diabetes*</p>	<p><b>Referrals</b></p> <p>If not already done, referral to Diabetes Central Intake (1-855-DIA-BETS)*</p> <p><b>Tests</b></p> <p>If 1st trimester OGTT is normal repeat 75 gm OGTT at 24-28 weeks • Dx of GDM with one elevated value FPG <math>\geq 5.1 \text{ mmol/L}</math> 1HPG <math>\geq 10.0 \text{ mmol/L}</math> 2HPG <math>\geq 8.5 \text{ mmol/L}</math></p> <p>Self-monitoring of blood glucose fasting and 1 hr pc meals If on insulin, self-monitoring of blood glucose ac and 1 hr pc meals Ketone testing every morning TSH (Target 0.1-2.5 mIU/L until 20 weeks 0.2-3.0 mIU/L after 20 weeks) • If above target order free T4 + thyroid antibodies • If below target order free T3 + free T4 If abnormal thyroid, repeat tests every 4 weeks</p> <p><b>Targets</b></p> <p>BP <math>&lt; 130/80</math> FBS and Preprandial BG <math>&lt; 5.3 \text{ mmol/L}</math> 1 hr postprandial BG <math>&lt; 7.8 \text{ mmol/L}</math> 2 hr postprandial BG <math>&lt; 6.7 \text{ mmol/L}</math></p> <p><b>Treatment</b></p> <p>Prenatal Vitamins with 0.4 to 1.0 mg Folic Acid, Vitamin D 4000 IU Initiate Insulin therapy if: • Fasting Blood glucose above target • Initiate 4-5 units basal insulin at bedtime (NPH, Detemir, Glargine) • Postprandial blood glucose above target • Initiate 2-4 units rapid (Lispro, Aspart) before the meal If insulin therapy refused, glyburide or metformin may be considered</p> <p><b>Teach</b></p> <p>Pathophysiology of GDM Review nutrition and exercise guidelines Review changing insulin requirements Review hypoglycemia treatment if on insulin</p> <p><b>Frequency of Visits</b></p> <p>Every 2 weeks Consider more frequent in those with poor glycemic control, and/or hypertension</p> <p><b>Supporting Documents</b></p> <p>*A Record of My Journey with Pregnancy and Diabetes*</p>
<b>Stage:</b>	<b>3<sup>rd</sup> Trimester (28-42 weeks)</b>			
<b>Activities:</b>	<p><b>Referrals</b></p> <p>Consider referral to nephrologist if: • serum creatinine <math>\geq 100 \mu\text{mol/L}</math> or • urine ACR <math>\geq 2.0 \text{ mg/mmol}</math></p> <p><b>Tests</b></p> <p>Self-monitoring of blood glucose ac and 1 hr pc meals, hs and occasionally during night Repeat retinal eye exam if required A1C, creatinine Urine ACR TSH (Target 0.2-3.0 mIU/L) If abnormal thyroid test repeat every 4 weeks Consider ultrasound at 36-38 weeks for fetal growth</p> <p><b>Targets</b></p> <p>A1C <math>\leq 7\%</math> (or as close to normal as can safely be achieved) BP <math>&lt; 130/80</math> FBS and Preprandial BG <math>&lt; 5.3 \text{ mmol/L}</math> 1 hr postprandial BG <math>&lt; 7.8 \text{ mmol/L}</math> 2 hr postprandial BG <math>&lt; 6.7 \text{ mmol/L}</math> (Be prepared to raise these targets if needed because of the increased risk of severe hypoglycemia)</p> <p><b>Treatment</b></p> <p>Prenatal Vitamins with 0.4 to 1.0 mg Folic Acid, Vitamin D 4000 IU Basal Bolus Insulin or Insulin Pump Ongoing insulin adjustments</p> <p><b>Teach</b></p> <p>Monitor fetal movement Unexplained hypoglycemia due to maturing placenta, may alert possible need for an early delivery or increased fetal monitoring Offer information and advice about: • When to go to hospital • What diabetes supplies to take to hospital • What to do with insulin Changes to insulin therapy during and after birth Importance of breastfeeding Continue prenatal vitamins if breastfeeding</p> <p><b>Frequency of Visits</b></p> <p>Weekly after 36 weeks Book postpartum follow-up for diabetes education and diabetes specialist</p> <p><b>Supporting Documents</b></p> <p>At 34 weeks, give insulin orders for delivery Nutrition and breastfeeding guidelines</p>	<p><b>Referrals</b></p> <p>Consider referral to nephrologist if: • serum creatinine <math>\geq 100 \mu\text{mol/L}</math> or • urine ACR <math>\geq 2.0 \text{ mg/mmol}</math></p> <p><b>Tests</b></p> <p>Self-monitoring of blood glucose ac and 1 hr pc meals Repeat retinal eye exam if required A1C, creatinine Urine ACR TSH (Target 0.2-3.0 mIU/L) If abnormal thyroid test repeat every 4 weeks Consider ultrasound at 36-38 weeks for fetal growth</p> <p><b>Targets</b></p> <p>A1C <math>\leq 7\%</math> (or as close to normal as can safely be achieved) BP <math>&lt; 130/80</math> FBS and Preprandial BG <math>&lt; 5.3 \text{ mmol/L}</math> 1 hr postprandial BG <math>&lt; 7.8 \text{ mmol/L}</math> 2 hr postprandial BG <math>&lt; 6.7 \text{ mmol/L}</math></p> <p><b>Treatment</b></p> <p>Prenatal Vitamins with 0.4 to 1.0 mg Folic Acid, Vitamin D 4000 IU Basal Bolus Insulin or Insulin Pump Ongoing insulin adjustments</p> <p><b>Teach</b></p> <p>Monitor fetal movement Unexplained hypoglycemia due to maturing placenta, may alert possible need for an early delivery or increased fetal monitoring Offer information and advice about: • When to go to hospital • What diabetes supplies to take to hospital • What to do with insulin Changes to insulin therapy during and after birth Importance of returning to pre-pregnancy weight to reduce risk of Type 2 diabetes Importance of postpartum OGTT Importance of breastfeeding Continue prenatal vitamins if breastfeeding</p> <p><b>Frequency of Visits</b></p> <p>Weekly after 36 weeks Book postpartum follow-up for diabetes education and diabetes specialist</p> <p><b>Supporting Documents</b></p> <p>At 34 weeks, give insulin orders for delivery Nutrition and breastfeeding guidelines</p>	<p><b>Referrals</b></p> <p>If not already done: Referral to Diabetes Central Intake (1-855-DIA-BETS)*</p> <p><b>Tests</b></p> <p>Self-monitoring of blood glucose fasting and 1 hr pc meals If on insulin, self-monitoring of blood glucose ac and 1 hr pc meals TSH (Target 0.2-3.0 mIU/L) If abnormal thyroid test repeat every 4 weeks Consider ultrasound at 36-38 weeks for fetal growth Preparation for postpartum OGTT</p> <p><b>Targets</b></p> <p>BP <math>&lt; 130/80</math> FBS and Preprandial BG <math>&lt; 5.3 \text{ mmol/L}</math> 1 hr postprandial BG <math>&lt; 7.8 \text{ mmol/L}</math> 2 hr postprandial BG <math>&lt; 6.7 \text{ mmol/L}</math></p> <p><b>Treatment</b></p> <p>Prenatal Vitamins with 0.4 to 1.0 mg Folic Acid, Vitamin D 4000 IU Initiate Insulin therapy if: • Fasting Blood glucose above target • Initiate 4-5 units basal insulin at bedtime (NPH, Detemir, Glargine) • Postprandial blood glucose above target • Initiate 2-4 units rapid (Lispro, Aspart) before the meal If insulin therapy refused, glyburide or metformin may be considered</p> <p><b>Teach</b></p> <p>Monitor fetal movement Unexplained hypoglycemia due to maturing placenta, may alert possible need for an early delivery or increased fetal monitoring Offer information and advice about: • When to go to hospital • What diabetes supplies to take to hospital • What to do with insulin Changes to insulin therapy during and after birth Importance of returning to pre-pregnancy weight to reduce risk of Type 2 diabetes Importance of postpartum OGTT Importance of breastfeeding Continue prenatal vitamins if breastfeeding</p> <p><b>Frequency of Visits</b></p> <p>Weekly after 36 weeks Book postpartum follow-up for diabetes education and diabetes specialist</p> <p><b>Supporting Documents</b></p> <p>At 34 weeks, give insulin orders for delivery Nutrition and breastfeeding guidelines</p>	<p><b>Referrals</b></p> <p>If not already done, referral to Diabetes Central Intake (1-855-DIA-BETS)*</p> <p><b>Tests</b></p> <p>Self-monitoring of blood glucose fasting and 1 hr pc meals If on insulin, self-monitoring of blood glucose ac and 1 hr pc meals TSH (Target 0.2-3.0 mIU/L) If abnormal thyroid test repeat every 4 weeks Consider ultrasound at 36-38 weeks for fetal growth Preparation for postpartum OGTT</p> <p><b>Targets</b></p> <p>BP <math>&lt; 130/80</math> FBS and Preprandial BG <math>&lt; 5.3 \text{ mmol/L}</math> 1 hr postprandial BG <math>&lt; 7.8 \text{ mmol/L}</math> 2 hr postprandial BG <math>&lt; 6.7 \text{ mmol/L}</math></p> <p><b>Treatment</b></p> <p>Prenatal Vitamins with 0.4 to 1.0 mg Folic Acid, Vitamin D 4000 IU Initiate Insulin therapy if: • Fasting Blood glucose above target • Initiate 4-5 units basal insulin at bedtime (NPH, Detemir, Glargine) • Postprandial blood glucose above target • Initiate 2-4 units rapid (Lispro, Aspart) before the meal If insulin therapy refused, glyburide or metformin may be considered</p> <p><b>Teach</b></p> <p>Monitor fetal movement Unexplained hypoglycemia due to maturing placenta, may alert possible need for an early delivery or increased fetal monitoring Offer information and advice about: • When to go to hospital • What diabetes supplies to take to hospital • What to do with insulin Changes to insulin therapy during and after birth Importance of returning to pre-pregnancy weight to reduce risk of Type 2 diabetes Importance of postpartum OGTT Importance of breastfeeding Continue prenatal vitamins if breastfeeding</p> <p><b>Frequency of Visits</b></p> <p>Weekly after 36 weeks Book postpartum follow-up for diabetes education and diabetes specialist</p> <p><b>Supporting Documents</b></p> <p>At 34 weeks, give insulin orders for delivery Nutrition and breastfeeding guidelines</p>
<b>Stage:</b>	<b>Labour and Delivery</b>			
<b>Activities:</b>	<p><b>Referrals</b></p> <p>Consider elective delivery at 38-39 weeks If fetal macrosomia, consider early induction at 37-38 weeks</p> <p><b>Tests</b></p> <p>Monitor blood glucose every 2 hours during early labour and every 1 hour during active labour Biophysical monitoring of baby</p> <p><b>Targets</b></p> <p>BG 4-7 mmol/L BP <math>&lt; 130/80</math></p> <p><b>Treatment</b></p> <p>Mainline: DSW @ 75ml/hr Piggy-back: Insulin infusion 50u/500 mL DSW—see patient care orders</p> <p><b>Supporting Documents</b></p> <p>Patient Care Orders—Intra-partum Management of Diabetes and Pregnancy Patient Care Orders—Postpartum Management of Diabetes and Pregnancy</p>	<p><b>Referrals</b></p> <p>Consider elective delivery at 38-39 weeks If fetal macrosomia, consider early induction at 37-38 weeks</p> <p><b>Tests</b></p> <p>Monitor blood glucose every 2 hours during early labour and every 1 hour during active labour Biophysical monitoring of baby</p> <p><b>Targets</b></p> <p>BG 4-7 mmol/L BP <math>&lt; 130/80</math></p> <p><b>Treatment</b></p> <p>Mainline: DSW @ 75ml/hr Piggy-back: Insulin infusion 50u/500 mL DSW—see patient care orders</p> <p><b>Supporting Documents</b></p> <p>Patient Care Orders—Intra-partum Management of Diabetes and Pregnancy Patient Care Orders—Postpartum Management of Diabetes and Pregnancy</p>	<p><b>Referrals</b></p> <p>If on insulin, consider elective delivery at 38-39 weeks If fetal macrosomia, consider early induction at 37-38 weeks If diet controlled, no special intervention unless other obstetrical concerns</p> <p><b>Tests</b></p> <p>Monitor blood glucose every 2 hours during early labour and every 1 hour during active labour Biophysical monitoring of baby</p> <p><b>Targets</b></p> <p>BG 4-7 mmol/L BP <math>&lt; 130/80</math></p> <p><b>Treatment</b></p> <p>Mainline: DSW @ 75ml/hr—see patient care orders For insulin infusion requirements—see patient care orders</p> <p><b>Supporting Documents</b></p> <p>Patient Care Orders—Intra-partum Management of Diabetes and Pregnancy Patient Care Orders—Postpartum Management of Diabetes and Pregnancy</p>	<p><b>Referrals</b></p> <p>If on insulin, consider elective delivery at 38-39 weeks If fetal macrosomia, consider early induction at 37-38 weeks If diet controlled, no special intervention unless other obstetrical concerns</p> <p><b>Tests</b></p> <p>Monitor blood glucose every 2 hours during early labour and every 1 hour during active labour Biophysical monitoring of baby</p> <p><b>Targets</b></p> <p>BG 4-7 mmol/L BP <math>&lt; 130/80</math></p> <p><b>Treatment</b></p> <p>Mainline: DSW @ 75ml/hr—see patient care orders For insulin infusion requirements—see patient care orders</p> <p><b>Supporting Documents</b></p> <p>Patient Care Orders—Intra-partum Management of Diabetes and Pregnancy Patient Care Orders—Postpartum Management of Diabetes and Pregnancy</p>
<b>Stage:</b>	<b>Postpartum (0 to 6 months)</b>			
<b>Activities:</b>	<p><b>Referrals</b></p> <p>Reminder for diabetes education and diabetes specialist appointment</p> <p><b>Tests</b></p> <p>Retinal eye exam A1C, creatinine, eGFR Urine ACR TSH at 6-8 weeks postpartum (Target: normal as per lab) • If above target order free T4 + thyroid antibodies • If below target order free T3 + free T4 If on thyroid medication during pregnancy, target: <math>&lt; 3 \text{ mIU/L}</math> Lipid profile</p> <p><b>Targets</b></p> <p>A1C <math>\leq 7\%</math> BP <math>&lt; 130/80</math> BG 4-7 mmol/L FPG or preprandial PG 5-10 mmol/L 2 hours postprandial PG</p> <p><b>Treatment</b></p> <p>Basal bolus insulin or insulin pump Continue prenatal vitamins &amp; vitamin D while breastfeeding Thyroid medication may need reduction to reach target</p> <p><b>Teach</b></p> <p>Reinforce importance of pre-pregnancy planning for future pregnancies including: • Folic Acid, Vitamin D • Good glycemic control • Contraception Review insulin dose adjustments and changing insulin requirements Encourage breast feeding to benefit mother and baby Advise about hypoglycemia especially if breastfeeding Remain active</p> <p><b>Frequency of Visits</b></p> <p>Follow-up visit in 6 weeks and every 3 months with diabetes education and diabetes specialist</p>	<p><b>Referrals</b></p> <p>Reminder for diabetes education and diabetes specialist appointment</p> <p><b>Tests</b></p> <p>Retinal eye exam A1C, creatinine, eGFR Urine ACR TSH at 6-8 weeks postpartum (Target: normal as per lab) • If above target order free T4 + thyroid antibodies • If below target order free T3 + free T4 If on thyroid medication during pregnancy, target: <math>&lt; 3 \text{ mIU/L}</math> Lipid profile</p> <p><b>Targets</b></p> <p>A1C <math>\leq 7\%</math> BP <math>&lt; 130/80</math> BG 4-7 mmol/L FPG or preprandial PG 5-10 mmol/L 2 hours postprandial PG</p> <p><b>Treatment</b></p> <p>Basal bolus insulin or metformin or or glyburide can be used when breastfeeding Other oral agents can be used if not breastfeeding Continue prenatal vitamins &amp; vitamin D while breastfeeding Thyroid medication may need reduction to reach target</p> <p><b>Teach</b></p> <p>Reinforce importance of pre-pregnancy planning for future pregnancies including: • Folic Acid, Vitamin D • Good glycemic control • Contraception Encourage breast feeding to benefit mother and baby Advise about hypoglycemia especially if breastfeeding Recommend return to healthy body weight Remain active</p> <p><b>Frequency of Visits</b></p> <p>Follow-up visit in 6 weeks and every 3 months with diabetes specialist Postpartum diabetes education</p>	<p><b>Referrals</b></p> <p>Reminder for diabetes education and diabetes specialist appointment</p> <p><b>Tests</b></p> <p>75 gm OGTT between 6 weeks and 6 months postpartum • If normal, regular follow-up with GP to screen for development of Type 2 • If confirmed dx, referral to Diabetes Central Intake (1-855-DIA-BETS) For lean women <math>&lt; 30</math> years of age, who required insulin, consider dx, Type 1 anti-GAD, anti-IGG (insulin antibodies) TSH at 6-8 weeks postpartum (Target: normal as per lab) • If above target order free T4 + thyroid antibodies • If below target order free T3 + free T4 • If on thyroid medication during pregnancy, target: <math>&lt; 3 \text{ mIU/L}</math></p> <p><b>Targets</b></p> <p>A1C <math>\leq 5.5\%</math> FBS <math>&lt; 5.8 \text{ mmol/L}</math> Normal BP</p> <p><b>Treatment</b></p> <p>Continue prenatal vitamins &amp; vitamin D while breastfeeding Thyroid medication may need reduction to reach target</p> <p><b>Teach</b></p> <p>Reinforce importance of pre-pregnancy planning for future pregnancies including: • Folic Acid, Vitamin D • Good glycemic control • Contraception Encourage breast feeding to benefit mother and baby Recommend return to healthy body weight Remain active</p> <p><b>Frequency of Visits</b></p> <p>Follow-up visit in 6 weeks with diabetes specialist Postpartum diabetes education</p>	<p><b>Referrals</b></p> <p>Reminder for diabetes education and diabetes specialist appointment</p> <p><b>Tests</b></p> <p>75 gm OGTT between 6 weeks and 6 months postpartum • If normal, regular follow-up with GP to screen for development of Type 2 • If confirmed dx, referral to Diabetes Central Intake (1-855-DIA-BETS) For lean women <math>&lt; 30</math> years of age, who required insulin, consider dx, Type 1 anti-GAD, anti-IGG (insulin antibodies) TSH at 6-8 weeks postpartum</p>