Quality Standards

Diabetes in Pregnancy

Care for People of Reproductive Age

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Health Quality Ontario

Let's make our health system healthier

Ontario

About This Quality Standard

The following quality standard addresses **care for people with type 1 and type 2 diabetes who become pregnant and people diagnosed with gestational diabetes**.

It includes preconception care as well as management of diabetes during pregnancy. It applies to all settings, including inpatient hospital care, correctional facilities, primary care, specialist care, hospital outpatient clinics, and community care.

This quality standard does not include guidance on preventing gestational diabetes or on postpartum care for neonates born to people with diabetes in pregnancy.

What Is a Quality Standard?

Quality standards outline what high-quality care looks like for conditions or processes where there are large variations in how care is delivered, or where there are gaps between the care provided in Ontario and the care patients should receive. They:

- Help patients, families, and caregivers know what to ask for in their care
- Help health care professionals know what care they should be offering, based on evidence and expert consensus
- Help health care organizations measure, assess, and improve their performance in caring for patients

Quality standards are developed by Health Quality Ontario, in collaboration with health care professionals, patients, and caregivers across Ontario.

For more information, contact qualitystandards@hqontario.ca.

Values That Are the Foundation of This Quality Standard

This quality standard was created, and should be implemented, according to the Patient Declaration of Values for Ontario. This declaration "is a vision that articulates a path toward patient partnership across the health care system in Ontario. It describes a set of foundational principles that are considered from the perspective of Ontario patients, and serves as a guidance document for those involved in our health care system."

These values are:

- Respect and dignity
- Empathy and compassion
- Accountability
- Transparency
- Equity and engagement

People with diabetes in pregnancy benefit from care provided by a care provider or care team with the knowledge, skills, and judgment to provide evidence-based treatment for diabetes in

pregnancy while also addressing all health care needs. The goal of management is to improve symptoms, function, quality of life, and prognosis.

People with diabetes in pregnancy benefit from care providers who respect their priorities and recognize their diversity and specific needs. Care providers should have the support necessary to develop the capacity to address social determinants of health, including access to transportation, safe housing, and sufficient income.[1]

Care providers should consider that the strongest predictors of complications of diabetes are lifestyle factors—diet, physical activity levels, and stress—that are driven by social determinants of health. For example, a person's income, employment, experiences with discrimination, physical mobility, and geographical location may affect their ability to access health care services and healthy and affordable food. Health care providers can better support people with diabetes by acknowledging that some of these barriers may make it harder for some patients to follow a healthy diet, lose weight, or increase their physical activity levels.

Management of diabetes in pregnancy in Indigenous populations should follow the same guidance as those for the general population.[1] However, care providers should be aware of the historical context of the lives of Indigenous Peoples throughout Canada and be sensitive to the impacts of intergenerational trauma and the physical, mental, emotional, and social harms experienced by Indigenous people, families, and communities. Approaches to care can include holistic healing and healers for people and communities should be tailored to address these needs.

Care providers should understand the destructive effects of the residential school experience, Indian hospitals, the Sixties Scoop, and other tools of colonization on the health of survivors and their descendants. Residential school survivors describe living with extreme hunger and malnutrition while in residential schools as children, which substantially shaped their growth and development, including stunted growth, greater insulin sensitivity, lowered metabolic rate, increased gestational complications in people who are pregnant, and lowered immune system development and function.[11] Accumulatively, these physical effects, combined with trauma and ongoing discrimination, have led to increased rates of obesity and made Indigenous people more prone to developing type 2 diabetes and diabetes in pregnancy.[11]

Quality Statements to Improve Care

These quality statements describe what high-quality care looks like for people with diabetes in pregnancy.

Quality Statement 1: Preconception Care for People With Diabetes
All people of reproductive age who might get pregnant who are living with diabetes receive information about family planning. People with diabetes who are planning to get pregnant receive preconception care from an interprofessional care team, including counselling on optimizing diabetes management, screening for complications, and a review of medications.

Quality Statement 2: Coordinated Interprofessional Care
People with diabetes in pregnancy receive interprofessional care specific to their needs during preconception and throughout pregnancy. People with gestational diabetes receive interprofessional care at the time of diagnosis and throughout the remainder of their pregnancy.

Quality Statement 3: Self-Management Education and Support
People with diabetes in pregnancy and their families are offered tailored self-management education and support at the beginning of pregnancy, or at the time of gestational diabetes diagnosis, and throughout their pregnancy as needed.

Quality Statement 4: Lifestyle Management During Pregnancy
People with diabetes in pregnancy receive information and support about gestational weight gain, diet, and physical activity to optimize blood glucose levels and maternal and fetal outcomes at the beginning of pregnancy, or at the time of gestational diabetes diagnosis, and throughout pregnancy.

Quality Statement 5: Fetal Monitoring and Timing of Delivery
People with diabetes in pregnancy receive increased fetal monitoring based on glucose control, maternal complications, comorbid conditions, and/or fetal well-being. Induction of labour can be considered before 40 weeks' gestation if maternal or fetal indications exist.

Quality Statement 6: Postpartum Diabetes Screening for People With Gestational Diabetes
People with gestational diabetes are screened for prediabetes and type 2 diabetes with a 75 g oral glucose tolerance test between 6 weeks and 6 months postpartum.

Table of Contents

Scope of This Quality Standard

This quality standard addresses care for people living with type 1 or type 2 diabetes who are planning to be or are pregnant and for people diagnosed with gestational diabetes. It does not address the primary prevention of gestational diabetes in the general population, although it does provide guidance on lifestyle factors that may contribute to the development of type 2 diabetes in those who previously had gestational diabetes and are therefore at increased risk.

This quality standard applies to all settings, including inpatient hospital care, correctional facilities, primary care, community care, specialist care, and hospital outpatient clinics.

This quality standard includes six quality statements on areas identified by Health Quality Ontario's Diabetes in Pregnancy Quality Standard Advisory Committee and several health and social service organizations working with Indigenous populations as having high potential to improve the quality of care in Ontario for people with diabetes in pregnancy.

Why This Quality Standard Is Needed

Diabetes is a chronic disease that is characterized by hyperglycemia. If not properly managed, it can lead to serious complications, a diminished quality of life, and a life expectancy reduced by 5 to 15 years.[2,3] In 2015, an estimated 1.5 million Ontarians, or 10.2% of the provincial population, were living with diabetes. An additional 2.3 million Ontarians aged 20 years and older, or 21.8% of the population aged 20 years and older, had prediabetes. In total, diabetes is estimated to cost Ontarians $6 billion each year.[4]

There is considerable variation across the province in the rates of all types of diabetes. Data from the 2016/17 fiscal year showed that the Central West, Central East, and North East regions had almost twice as many diagnosed cases compared with the Toronto Central region (Medical Services Database, extracted using IntelliHealth). In addition to regional variation, diabetes is also seen more frequently in Ontarians living in rural regions than in those living in urban areas.[5]

The prevalence of diabetes in pregnancy, including both gestational diabetes (diabetes diagnosed in pregnancy) and pre-existing diabetes (diabetes diagnosed before pregnancy) doubled in Ontario between 2000 and 2014.[6] By 2010, almost 10% of pregnant people 30 years of age and older experienced diabetes in pregnancy.[6] Most cases were gestational diabetes (7.4% of pregnancies), with the remainder being pre-existing type 1 and type 2 diabetes (1.9% of pregnancies).[6]

Gestational diabetes is a temporary condition that affects 3% to 20% of pregnancies in Ontario, depending on risk factors and the diagnostic criteria used.[7,8] However, the risk of developing type 2 diabetes among people with previous gestational diabetes increases over time, occurring in almost 20% of cases within 9 years postpartum.[13] Certain populations experience higher rates of gestational diabetes: those with a low income, racialized populations (African, Arab, Asian, Hispanic, and South Asian), and Indigenous populations.[1,5,9] In a 30-year postpartum follow-up study in Manitoba, First Nations people with prior gestational diabetes had the highest rate of diabetes—almost 80% compared with non–First Nations people who had gestational diabetes and people without gestational diabetes.[10] Furthermore, diabetes in pregnancy may increase the risk of obesity and type 2 diabetes in offspring later in life.[6] Risk factors for

gestational diabetes, such as ethnicity, family history of diabetes, polycystic ovarian syndrome, advanced maternal age, early diagnosis of gestational diabetes, and obesity, are well documented in Ontario.[1]

In general, people with diabetes in pregnancy have higher rates of complications compared with the general population, including perinatal mortality, hypertension, preterm delivery, Caesarean delivery, large-for-gestational-age infants, congenital malformations, and other neonatal morbidities that are exacerbated if blood glucose levels are not well managed.[1,6] People with type 1 diabetes and type 2 diabetes carry significantly greater maternal and fetal risk than those with gestational diabetes.[6] As a result, careful glycemic control throughout pregnancy is crucial for optimal maternal and fetal outcomes.

This quality standard focuses on the needs of all people with diabetes in pregnancy, with particular consideration given to the populations that are more susceptible to diabetes in pregnancy. Based on evidence, consultations with people who had diabetes in pregnancy, and clinical expert consensus, the six quality statements that make up this quality standard provide guidance on high-quality care. Accompanying indicators will help care providers and organizations monitor and improve the quality of care for people with diabetes in pregnancy living in Ontario.

How to Use This Quality Standard

Quality standards inform patients, clinicians, and organizations about what high-quality care looks like for health conditions or processes deemed a priority for quality improvement in Ontario. They are based on the best evidence.

Guidance on how to use quality standards and their associated resources are included below.

For Patients

This quality standard consists of quality statements. These describe what high-quality care looks like for people with diabetes in pregnancy.

Within each quality statement, we've included information on what these statements mean for you, as a patient.

In addition, you may want to download this accompanying patient guide on diabetes in pregnancy, to help you and your family have informed conversations with your health care providers. Inside, you will find questions you may want to ask as you work together to make a plan for your care.

For Clinicians and Organizations

The quality statements within this quality standard describe what high-quality care looks like for people with diabetes in pregnancy.

They are based on the best evidence and designed to help you know what to do to reduce gaps and variations in care.

Many clinicians and organizations are already providing high-quality evidence-based care. However, there may be elements of your care that can be improved. This quality standard can serve as a resource to help you prioritize and measure improvement efforts.

Tools and resources to support you in your quality improvement efforts accompany each quality standard. These resources include indicators and their definitions (Appendix 2) to help you assess the quality of care you are delivering, and identify gaps in care and areas for improvement. While it is not mandatory to use or collect data when using a quality standard to improve care, measurement is key to quality improvement.

There are also a number of resources online to help you, including:

- Our patient guide on diabetes in pregnancy, which you can share with patients and families to help them have conversations with you and their other health care providers. Please make the patient guide available where you provide care
- Our measurement resources, which include our data tables to help you identify gaps in care and inform your resource planning and improvement efforts; our measurement guide of technical specifications for the indicators in this standard; and our "case for improvement" slide deck to help you to share why this standard was created and the data behind it
- Our *Getting Started Guide*, which includes links to templates and tools to help you put quality standards into practice. This guide shows you how to plan for, implement, and sustain changes in your practice
- Quorum, an online community dedicated to improving the quality of care across Ontario. This is a place where health care providers can share information, inform, and support each other, and it includes tools and resources to help you implement the quality statements within each standard
- Quality Improvement Plans, which can help your organization outline how it will improve the quality of care provided to your patients, residents, or clients in the coming year

While you implement this quality standard, there may be times you find it challenging to provide the care outlined due to system-level barriers. Appendix 1 provides our recommendations to provincial partners to help remove these barriers so you can provide high-quality care. In the meantime, there are many actions you can take on your own, so please read the standard and act where you can.

How to Measure Overall Success

The Diabetes in Pregnancy Quality Standard Advisory Committee identified some overarching goals for this quality standard. These goals were mapped to indicators that can be used to monitor the progress being made to improve transitions from hospital to home in Ontario. Some indicators are provincially measurable, while some can be measured using only locally sourced data.

Collecting and using data associated with this quality standard is optional. However, data will help you assess the quality of care you are delivering and the effectiveness of your improvement efforts.

We realize this standard includes a lengthy list of indicators. We've given you this list so you don't have to create your own quality improvement indicators. We recommend you identify

areas to focus on in the quality standard and then use one or more of the associated indicators to guide and evaluate your quality improvement efforts.

See Appendix 2 for additional details on how to measure these indicators and our measurement guide for more information and support.

Indicators That Can Be Measured Using Provincial Data

- Rate of all nonelective hospital visits for diabetes-specific reasons before delivery among people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who delivered in hospital
    - Stratify by:
        - Emergency department visits
        - Hospitalizations

  Note: diabetes-specific reasons include diabetes with poor control, diabetes without complication, diabetes with hypoglycemia, diabetes with ketoacidosis, diabetes with hyperosmolarity, or a main diagnosis of diabetes with hyperglycemia or hypoglycemia
- Percentage of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who delivered in hospital who have an intrapartum or antepartum outcome
    - Stratify by:
        - Pre-eclampsia
        - Operative vaginal delivery
        - Third- or fourth-degree lacerations
        - Caesarean section
- Percentage of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who delivered in hospital whose infant has an adverse neonatal outcome
    - Stratify by:
        - Neonatal hypoglycemia
        - Macrosomia
        - Shoulder dystocia
        - Stillbirth
        - Preterm birth
        - Hyperbilirubinemia
        - Respiratory distress
        - Neonatal mortality
- Percentage of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who delivered in hospital whose infant is admitted to a neonatal intensive care unit for 24 hours or more

Indicators That Can Be Measured Using Only Local Data

- Percentage of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who receive interprofessional care specific to their needs to manage their diabetes in pregnancy
  (Note: refer to quality statement 2 for stratifications of this indicator.)
- Percentage of people of reproductive age living with diabetes who are planning to get pregnant who receive preconception care from an interprofessional care team
- Percentage of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who receive care for their diabetes who feel involved in decisions about their own care

- Percentage of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who report feeling confident in knowing how to take care of and manage their diabetes during pregnancy

Quality Statements to Improve Care: The Details

Quality Statement 1: Preconception Care for People With Diabetes

All people of reproductive age who might get pregnant who are living with diabetes receive information about family planning. People with diabetes who are planning to get pregnant receive preconception care from an interprofessional care team, including counselling on optimizing diabetes management, screening for complications, and a review of medications.

Definitions

Preconception: The period of time before a person gets pregnant. Typically, preconception care occurs once a person with diabetes decides to try to become pregnant, but may also take place if a person is sexually active.

Family planning: This is pregnancy planning, and it should be discussed at the start of puberty. If the patient wishes, effective methods of contraception should be reviewed and prescribed. A discussion of family planning should be incorporated into routine diabetes care for all people of reproductive age who might get pregnant. The importance of avoiding an unplanned pregnancy should be a component of diabetes education beginning in adolescence for people with diabetes.

Optimal diabetes management: Diabetes management while planning a pregnancy includes preconception counselling about glycemic control, medications, nutrition, and physical activity. People with diabetes who wish to become pregnant should strive to attain a preconception glycated hemoglobin (hemoglobin A1C) of 7.0% or less (or ≤ 6.5% if it can safely be achieved) to decrease the risk of:

- Miscarriage
- Congenital anomalies
- Preeclampsia
- Progression of retinopathy in pregnancy
- Stillbirth

Screening for complications: This includes:

Ophthalmological assessment—People with type 1 or type 2 diabetes who are planning a pregnancy or who have become pregnant should be counselled on the risk of developing (or the progression of) diabetic retinopathy. Dilated eye examinations should occur before pregnancy or in the first trimester, and patients should be monitored every trimester and for 1 year after giving birth to identify progression of retinopathy.

Renal assessment—Before pregnancy, people with diabetes should be screened for chronic kidney disease. Albuminuria and overt nephropathy are associated with an increased risk of maternal and fetal complications.

Screening for hypertension—Before pregnancy, people with diabetes should be screened for hypertension at every diabetes-related clinical encounter and at least biannually.

Screening for mental health conditions—Before pregnancy, people with diabetes should be screened regularly (interval is based on individual indications) for diabetes-related psychological distress and psychiatric disorders.

Review of medications: People planning to become pregnant should take at least 1 mg of folic acid daily at least 3 months before conception until 12 weeks' gestation to prevent congenital abnormalities. The use of statins, angiotensin-converting enzyme inhibitors, and angiotensin receptor–blocking medications should be reviewed before conception and avoided during pregnancy.

Sources

American Diabetes Association, 2018[13] | Diabetes Canada, 2018[1] | National Institute for Health and Care Excellence, 2015[12] | Scottish Intercollegiate Guidelines Network, 2017[16]

Rationale

Starting in adolescence, people with diabetes should be provided information from a health care professional about contraception and the importance of family planning.[12,13] For people who are planning to get pregnant, preconception care can improve maternal and fetal outcomes. Interprofessional care teams should aim to empower people with diabetes who are planning to get pregnant to have a positive pregnancy experience and reduce their risks of adverse pregnancy outcomes.[12,14]

Pregnancy complications, including miscarriage, hypertension, Caesarean delivery, preterm delivery, congenital malformations, macrosomia, and stillbirth, are higher among people with diabetes compared with the general population.[1,15] Discontinuing potentially harmful medications, screening for diabetes-related complications, and achieving a healthy body weight are important components of preconception care.[1,12] People with type 2 diabetes have lower rates of attendance for preconception care than people with type 1 diabetes, and increased efforts are needed to educate and empower people with type 2 diabetes who are planning to get pregnant.[15] People with diabetes and their families should also be given information about how nausea and vomiting can affect blood glucose control and how to manage symptoms of pregnancy.

Preconception care should include:

- Optimizing diabetes management (reviewing blood glucose targets, individualized lifestyle goals, and smoking cessation[6] and discussing continuous glucose monitoring as an option for with people with type 1 diabetes)
- Screening for complications (e.g., kidney disease, retinopathy, hypertension, and mental health conditions)
- Reviewing current medications and discussing starting a multivitamin containing at least 1 mg of folic acid

What This Quality Statement Means

For People With Diabetes
You should receive information on how diabetes can affect pregnancy. If you are not planning a pregnancy, you should receive information about, and access to, birth control that meets your

needs. If you are planning to get pregnant, you should receive information and support on how to manage your diabetes before and during pregnancy.

For Clinicians
Discuss family planning with people of reproductive age with diabetes. If they are planning a pregnancy, review medications and glucose control and arrange screening tests. If they are not planning a pregnancy, offer them information about birth control methods that meet their needs and how to access them.

For Health Services Planners
Ensure that people with diabetes have access to preconception information and care that is relevant to their clinical condition.

Quality Indicators: How to Measure Improvement for This Statement

- Percentage of people of reproductive age who might get pregnant who are living with diabetes who receive information about family planning from a health care professional
- Percentage of people of reproductive age living with diabetes who are planning to get pregnant who receive preconception care from an interprofessional care team
- Percentage of people of reproductive age living with diabetes who are planning to get pregnant and who receive preconception care, who report feeling informed about how to manage their diabetes before and during pregnancy

Measurement details for these indicators, as well as indicators to measure overarching goals for the entire quality standard, are presented in Appendix 2.

Quality Statement 2: Coordinated Interprofessional Care

People with diabetes receive interprofessional care specific to their needs during preconception and throughout pregnancy. People with gestational diabetes receive interprofessional care at the time of diagnosis and throughout the remainder of their pregnancy.

Definitions

Interprofessional care team: A care team consisting of multiple providers with specific training in diabetes in pregnancy that is supported by specialist input should be integrated into preconception and pregnancy care. This team can include various roles as needed: nurses, dietitians, social workers, pharmacists, primary care providers, endocrinologists/internists, midwives, obstetricians, doulas, Elders, and community health workers with expertise in diabetes in pregnancy. People with diabetes in pregnancy and their families are an important part of the team and should participate in decisions about their care, if they choose.

Time of diagnosis: People are usually diagnosed with gestational diabetes between 24 and 28 weeks' gestation, after which they should receive interprofessional care as frequently as needed.

Sources

American Diabetes Association, 2018[13] | Diabetes Canada, 2018[1] | National Institute for Health and Care Excellence, 2015[12] | Scottish Intercollegiate Guidelines Network, 2017[16]

Rationale

Care from a collaborative interprofessional team, with expertise in preconception and diabetes in pregnancy care, has been shown to minimize maternal and fetal risks and help meet the individualized needs and preferences of each person with diabetes and their families.[1,12] An early working relationship should be established between the interprofessional care team and the person with diabetes to facilitate pregnancy planning and ensure the development of adequate knowledge and skills for self-management.

Models of delivering specialized, coordinated, interprofessional diabetes care can be adapted to the location and context where care is offered, and may be organized, staffed, and situated to best support local community needs. Telehealth technologies (e.g., telephone, web-based, or virtual) may be used to facilitate access to diabetes care teams and reduce travel time for patients and their families.

What This Quality Statement Means

For People With Diabetes in Pregnancy
You should have access to an interprofessional care team when planning a pregnancy, during pregnancy, and at the time of diagnosis of gestational diabetes. You and your family should be treated as important members of your diabetes care team. This means your questions, concerns, observations, and goals are discussed and incorporated into your care, and you are supported in playing an active role in your care.

For Clinicians
Ensure that people are cared for by an interprofessional team with the knowledge, skills, and judgment to manage their diabetes in pregnancy, and connect with additional providers as

needed. Provide support and ensure that your team can address your patients' physical health, mental health, and social needs. Involve people and their families in decisions about their own care.

For Health Services Planners
Ensure systems, processes, and resources are in place so that pregnant people with diabetes have access to an interprofessional care team with expertise in diabetes in pregnancy and the ability to expand or consult with additional care providers as needed.

Quality Indicators: How to Measure Improvement for This Statement

- Percentage of people of reproductive age living with diabetes who are planning to get pregnant who receive interprofessional care specific to their needs during preconception
- Percentage of people with pre-existing diabetes who are pregnant who receive interprofessional care specific to their needs during pregnancy
- Percentage of people with gestational diabetes who receive interprofessional care specific to their needs at the time of gestational diabetes diagnosis and throughout the remainder of their pregnancy
- Local availability of integrated electronic health records that allow the interprofessional care team (including providers in hospital, primary care, and community care settings) to share information with each other
- Percentage of people with diabetes in pregnancy who receive interprofessional care who feel involved in decisions about their own care
- Percentage of people with diabetes in pregnancy who receive interprofessional care who report that the model of care meets their individual needs and preferences

Measurement details for these indicators, as well as indicators to measure overarching goals for the entire quality standard, are presented in Appendix 2.

Quality Statement 3: Self-Management Education and Support

People with diabetes and their families are offered tailored self-management education and support at the beginning of pregnancy, or at the time of gestational diabetes diagnosis, and throughout their pregnancy as needed.

Definitions

Self-management education: Education on self-management should be evidence-based, culturally appropriate, and theory-driven; have a structured curriculum; and be based on individual needs and preferences. It should include the following content:

- Blood glucose monitoring and individualized targets
- Relevant medication administration, storage, and possible adverse effects
- Diet, physical activity, and gestational weight gain (see quality statement 4)
- Effect of blood glucose levels on maternal and fetal outcomes
- Purpose or indication of medications and possible adverse effects if applicable
- Benefits of breastfeeding for mother and baby
- Importance of postpartum diabetes screening for people with gestational diabetes
- Information on local resources for breastfeeding support
- Information on social and supportive resources for people with babies

Self-management support: A strategy to improve a person's ability to manage their diabetes independently. Support can come from regular follow-up with a health care provider, diabetes coach, peer, Elder, or community health worker, and may include connecting with community support services or interest groups.[1]

Sources

American Diabetes Association, 2018[13] | Diabetes Canada, 2018[1] | National Institute for Health and Care Excellence, 2015[12] | Scottish Intercollegiate Guidelines Network, 2017[16]

Rationale

Self-management education aims to provide people with diabetes in pregnancy information and skills to be actively engaged in decisions and daily practices related to their condition.[1,13] The provision of self-management education and support for people with diabetes has been shown to improve glycemic control, self-efficacy, and self-care behaviours and to reduce complications.[1]

Self-management education that is tailored to individual health needs and cultural beliefs is most effective in improving health behaviours and clinical outcomes, such as healthy diet and glycemic control.[1,12,13] Community and culturally tailored interventions are particularly relevant for minority communities and have been shown to lower glycated hemoglobin levels and improve diabetes-related knowledge and quality of life.[1]

Educational materials should be offered in both oral and written formats and should take into account the person's language and education level where possible to support understanding. The use of technology-enabled visits (e.g., telephone, web-based, or virtual) can help facilitate access to self-management support and reduce travel time for patients and their families.

What This Quality Statement Means

For People With Diabetes in Pregnancy
At the beginning of pregnancy for people with type 1 or type 2 diabetes, or at the time of diagnosis of gestational diabetes, as well as throughout pregnancy, you and your family or caregiver should have access to education and support to help you learn about and manage your diabetes during pregnancy. The education and support should be in a format that meets your needs. If you choose to include them, family and caregivers can also be offered this information and support.

For Clinicians
Offer evidence-based self-management education and support starting at the beginning of pregnancy, or at the time of diagnosis of gestational diabetes, and throughout pregnancy. This information should be tailored to meet the person's learning needs and be presented in a format that is most appropriate for the person. When family or community members are involved in the person's care, and if the person consents, include them as much as possible in education and support.

For Health Services Planners
Ensure that appropriate time and resources are available for care providers to support the development of self-management skills for people with diabetes in pregnancy. Build in processes that allow care providers to incorporate social and culturally relevant content, as determined by the patient, while also adhering to current clinical practice guidelines.

Quality Indicators: How to Measure Improvement for This Statement

- Percentage of people with pre-existing diabetes who are pregnant who receive tailored self-management education and support at the beginning of their pregnancy and throughout the remainder of their pregnancy
- Percentage of people with gestational diabetes who receive tailored self-management education and support at the time of gestational diabetes diagnosis and throughout the remainder of their pregnancy
- Percentage of people with diabetes in pregnancy who report feeling confident in knowing how to take care of and manage their diabetes during pregnancy

Measurement details for these indicators, as well as indicators to measure overarching goals for the entire quality standard, are presented in Appendix 2.

Quality Statement 4: Lifestyle Management During Pregnancy

People with diabetes in pregnancy receive tailored information and support about gestational weight gain, diet, and physical activity to optimize blood glucose levels and maternal and fetal outcomes at the beginning of pregnancy, or at the time of gestational diabetes diagnosis, and throughout pregnancy.

Definitions

Gestational weight gain: Recommendations for gestational weight gain vary according to body mass index classification[17]:

Pre-pregnancy weight category (body mass index)	Recommended range of total weight gain
Underweight (< 18.5)	12.5–18 kg (28–40 lb)
Normal (18.5–24.9)	11.5–6 kg (25–35 lb)
Overweight (25–29.9)	7–11.5 kg (15–25 lb)
Obese (≥ 30)	5–9 kg (11–20 lb)

Diet: Adoption of diabetes-friendly eating habits can help manage blood glucose levels. This includes selecting fewer processed foods (e.g., sugar-sweetened beverages, fast foods, and refined grain products) and more whole foods and low-glycemic-index foods, such as legumes, whole grains, and fruits and vegetables.[1,13] These foods can help control blood glucose and weight gain.

Blood glucose levels: Optimal blood sugar levels are as follows:

- Fasting and preprandial: < 5.3 mmol/L
- 1 hour postprandial: < 7.8 mmol/L
- 2 hours postprandial: < 6.7 mmol/L

Maternal and fetal outcomes: Gestational weight gain beyond recommended range, Caesarean section, stillbirth, increased fetal size, and shoulder dystocia can be the result of poorly controlled blood glucose levels during pregnancy.

Physical activity: Exercise during pregnancy can assist in glucose control and reduce complications. People without contraindications should strive for at least 150 minutes of moderate-intensity physical activity each week throughout pregnancy. Pregnant people can incorporate a variety of activities according to their abilities and resources, such as aerobic and resistance training, walking, yoga, and gentle stretching.

Sources

American Diabetes Association, 2018[13] | American College of Obstetricians and Gynecologists, 2012[17] | Diabetes Canada, 2018[1] | National Institute for Health and Care Excellence, 2015[12] | Scottish Intercollegiate Guidelines Network, 2017[16] | Society of Obstetricians and Gynecologists of Canada[18]

Rationale

Lifestyle management is an important component of diabetes in pregnancy management. Diet and physical activity interventions are the first step to achieving glucose targets and managing

weight gain in people newly diagnosed with gestational diabetes.[1] These interventions should be individualized and ongoing to fit the person's goals, promote adherence, and optimize pregnancy outcomes.

Culturally tailored dietary advice to achieve glycemic targets, appropriate fetal growth, and maternal weight gain should be provided to people with diabetes in pregnancy and their families, if they wish to be involved. Unless other contraindications exist, health care professionals should discuss the benefits of physical activity and help people with diabetes in pregnancy plan regular exercise that is safe, sustainable, and accessible to them in their community. People with diabetes in pregnancy should be given information about their individual gestational weight gain[17] target and be supported in making lifestyle changes, if needed.

What This Quality Statement Means

For People With Diabetes in Pregnancy
You should receive information and support about how diet, physical activity, and weight management affect your pregnancy and your diabetes. You and your care providers should develop a lifestyle plan that is safe and achievable to promote the health of you and the baby. If you choose to include them, your family or community should be involved in your plan.

For Care Providers
Ensure that people with diabetes in pregnancy are offered individualized, ongoing lifestyle counselling and support throughout their pregnancy that is evidence-based, safe, achievable, and culturally relevant. Diet, physical activity, and weight management plans should meet the person's needs and abilities and incorporate family and community if desired. This could include referral for social assistance, help applying for the Special Diet Allowance, if applicable, and information on community food resources, including food banks.

For Health Services Planners
Ensure that appropriate time and resources are available for care providers to support people with diabetes in pregnancy. Build in processes that allow care providers to incorporate socially and culturally relevant lifestyle management plans through consultation with community members and individuals.

Quality Indicators: How to Measure Improvement for This Statement

- Percentage of people with pre-existing diabetes who are pregnant who receive tailored information and support for lifestyle management at the beginning of their pregnancy and throughout the remainder of their pregnancy
- Percentage of people with gestational diabetes who receive tailored information and support for lifestyle management at the time of gestational diabetes diagnosis and throughout the remainder of their pregnancy
- Percentage of people with diabetes in pregnancy who feel that their individualized lifestyle management plan meets their needs and abilities

Measurement details for these indicators, as well as indicators to measure overarching goals for the entire quality standard, are presented in Appendix 2.

Quality Statement 5: Fetal Monitoring and Timing of Delivery

People with diabetes in pregnancy receive increased fetal monitoring based on glucose control, maternal complications, comorbid conditions, and/or fetal well-being. Induction of labour can be considered before 40 weeks' gestation if maternal or fetal indications exist.

Definitions

Fetal monitoring: In people with pre-existing diabetes, assessment of fetal well-being should be initiated by 32 weeks' gestation and performed weekly starting at 34 to 36 weeks' gestation until delivery. Earlier onset and/or more frequent fetal health surveillance is recommended in those considered at highest risk. Increased frequency of fetal assessment should be considered in people with gestational diabetes that is poorly controlled or associated with any comorbid conditions.

Comorbid conditions: Comorbid conditions that can occur in people with diabetes in pregnancy include cardiovascular complications, such as hypertensive disorders of pregnancy, obesity, chronic kidney disease, and retinopathy.

Induction of labour: In people with uncomplicated pre-existing diabetes, the process of artificially stimulating the uterus to start labour (induction) should be considered between 38 and 39 weeks' gestation to reduce the risk of stillbirth. Induction before 38 weeks' gestation should be considered when other fetal or maternal indications exist to prevent excess fetal growth, reduce the risk of shoulder dystocia, and decrease chances of Caesarean section. People with diet-controlled gestational diabetes should receive routine pregnancy management at term, with induction of labour planned according to obstetrical indications.

Maternal indications: Indications that would support induction of labour include poor glucose control, the presence of other comorbid conditions, and a multiple pregnancy.

Fetal indications: Indications that would support induction of labour include concerns about fetal size, growth pattern, and well-being.

Sources

American Diabetes Association, 2018[13] | Diabetes Canada, 2018[1] | National Institute for Health and Care Excellence, 2015[12] | Scottish Intercollegiate Guidelines Network, 2017[16] | Society of Obstetricians and Gynecologists of Canada[18]

Rationale

For people with diabetes in pregnancy, fetal monitoring and planned delivery can reduce the risks of stillbirth, Caesarean section, shoulder dystocia, and associated fetal macrosomia (an infant born with a birth weight > 4,500 g [9.9 lb]). With their patients, health care professionals should plan fetal monitoring, timing, and mode of delivery according to a person's health status. People with diabetes in pregnancy and their families should be given information about the risks and benefits of vaginal birth, induction of labour, Caesarean section, and timing of delivery.

There is no single strategy for antenatal monitoring of diabetes in pregnancy. For people with pre-existing diabetes and poorly controlled gestational diabetes, fetal monitoring can be conducted as early as 32 weeks' gestation and should be conducted weekly from 34 to

36 weeks' gestation until delivery. People with comorbid conditions can receive earlier and/or more frequent (biweekly) fetal health surveillance. For people with diet-controlled gestational diabetes, antenatal fetal monitoring should be based on obstetrical indications.

For people with uncomplicated pre-existing diabetes in pregnancy, induction may be considered between 38 and 39 weeks' gestation. Induction before 38 weeks' gestation should be considered when other fetal or maternal indications exist, such as poor glycemic control, for people with diabetes in pregnancy. The potential benefit of early-term induction needs to be weighed against the potential for increased neonatal complications. People with diet-controlled gestational diabetes should receive routine pregnancy management at term, with induction of labour planned according to obstetrical indications. Timing of induction of labour should be determined based on glycemic control and any other comorbid conditions.

What This Quality Statement Means

For People With Diabetes in Pregnancy
You and your health care professionals should discuss how they will monitor your pregnancy to ensure your baby is well and your options for timing and mode of delivery. They should give you information about what tests to expect and how to prepare for the birth of your baby, and should encourage you to have a support person with you at appointments.

For Clinicians
Discuss and plan fetal monitoring, timing, and modes of delivery with people with diabetes in pregnancy and their families. Provide information on the benefits and harms of all available options. Clearly explain and provide written information on follow-up care and any available resources.

For Health Services Planners
Ensure that appropriate time and resources are available for care providers to conduct fetal monitoring and plan timing of delivery for people with diabetes in pregnancy.

Quality Indicators: How to Measure Improvement for This Statement

- Percentage of people with pre-existing diabetes, poorly controlled gestational diabetes, or gestational diabetes with comorbid conditions who receive fetal monitoring beginning at 32 weeks' gestation and conducted weekly starting from 36 weeks' gestation until delivery
- Percentage of people with pre-existing diabetes without maternal or fetal indications who are induced between 38 and 39 weeks' gestation
- Percentage of people with either pre-existing diabetes or gestational diabetes who have maternal or fetal indications who are induced before 38 weeks' gestation
- Percentage or people with diabetes in pregnancy who report having discussions with their health care professional about fetal monitoring and the risks and benefits of the mode and timing of delivery

Measurement details for these indicators, as well as indicators to measure overarching goals for the entire quality standard, are presented in Appendix 2.

Quality Statement 6: Postpartum Diabetes Screening for People With Gestational Diabetes

People with gestational diabetes are screened for prediabetes and type 2 diabetes with a 75 g oral glucose tolerance test between 6 weeks and 6 months postpartum.

Definitions

75 g oral glucose tolerance test: The preferred diabetes screening test for people with previous gestational diabetes. Diabetes is diagnosed when plasma glucose is greater than or equal to 11.1 mmol/L 2 hours after taking 75 g of oral glucose).

Prediabetes: A state in which an individual is at high risk of developing type 2 diabetes and its complications.[1] People with prediabetes have been tested and have at least one of the following results: a fasting plasma glucose of 6.1 to 6.9 mmol/L; a glycated hemoglobin of 6.0% to 6.4%; or a plasma glucose of 7.8 to11 mmol/L 2 hours after taking a 75 g oral glucose tolerance test. Not all individuals with prediabetes will progress to type 2 diabetes. Some will revert to normoglycemia.

Sources

American Diabetes Association, 2018[13] | Diabetes Canada, 2018[1] | National Institute for Health and Care Excellence, 2015[12] | Scottish Intercollegiate Guidelines Network, 2017[16]

Rationale

People diagnosed with gestational diabetes have a higher risk of developing type 2 diabetes in the future. Postpartum screening is important to identify people who may have undiagnosed diabetes or prediabetes so that they receive appropriate care. People should be informed of their clinical and demographic risks and supported in making any needed lifestyle changes to decrease the risk of developing diabetes.

The earlier diabetes or prediabetes is discovered, the sooner preventive measures can be taken to decrease or slow the progression. Blood glucose testing should be done as part of intrapartum care and before being discharged to the community to rule out persistent hyperglycemia.[12] People who have had gestational diabetes should receive a lab requisition and information about the test from a health care professional. Even when blood glucose levels return to normal in the intrapartum period, it is recommended that people are screened for diabetes between 6 weeks and 6 months postpartum with a 75 g oral glucose tolerance test. Alternate methods of testing may be used for people who have undergone gastric bypass surgery.

Postpartum diabetes screening rates are low across Ontario and people should be reminded through various approaches (e.g., letters, phone calls, emails, texts) to get screened at a time and location that best suit their needs.[1,12,19-21]

What This Quality Statement Means

For People With Gestational Diabetes
Between 6 weeks and 6 months after you give birth, you should get your blood tested to make sure you have not developed prediabetes or type 2 diabetes. You should receive a lab requisition and information about the test from a health care professional.

For Clinicians
People with gestational diabetes should be screened for ongoing diabetes with an oral glucose tolerance test between 6 weeks and 6 months postpartum. Provide people with information on how to prepare for the test and discuss how the results will be communicated. Planning for testing should be done with the individual or community to accommodate their needs.

For Health Services Planners
Ensure that systems and resources are in place that support postpartum screening and testing services for type 2 diabetes. Screening and prevention strategies should be implemented in collaboration with people with diabetes, caregivers, community leaders, health care providers, and funding agencies and should engage entire communities.[22]

Quality Indicator: How to Measure Improvement for This Statement

- Percentage of people with previous gestational diabetes who are screened for prediabetes and type 2 diabetes with a 75 g oral glucose tolerance test between 6 weeks and 6 months postpartum

Measurement details for this indicator, as well as indicators to measure overarching goals for the entire quality standard, are presented in Appendix 2.

Appendix 1: How the Health Care System Can Support Implementation

To come

Appendix 2: Measurement to Support Improvement

The Diabetes in Pregnancy Quality Standard Advisory Committee identified some overarching goals for this quality standard. These goals were mapped to indicators that can be used to monitor the progress being made to improve transitions from hospital to home in Ontario. Some indicators are provincially measurable, while some can be measured using only locally sourced data.

Collecting and using data associated with this quality standard is optional. However, data will help you assess the quality of care you are delivering and the effectiveness of your improvement efforts.

We realize this standard includes a lengthy list of indicators. We've given you this list so you don't have to create your own quality improvement indicators. We recommend you identify areas to focus on in the quality standard and then use one or more of the associated indicators to guide and evaluate your quality improvement efforts.

To assess equitable delivery of care, you can stratify locally measured indicators by patient socioeconomic and demographic characteristics, such as age, education, gender, income, language, and sex.

Our measurement guide for transitions between hospital and home provides more information and concrete steps on how to incorporate measurement into your planning and quality improvement work.

How to Measure Overall Success

Indicators That Can Be Measured Using Provincial Data

Rate of all nonelective hospital visits for diabetes-specific reasons before delivery among people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who delivered in hospital

- Stratify by:
  - Emergency department visits
  - Hospitalizations
- Denominator: total number of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who delivered in hospital
- Numerator: number of people in the denominator who had nonelective hospital visits for diabetes-specific reasons before delivery
- Data sources: Discharge Abstract Database (DAD), National Ambulatory Care Reporting System (NACRS), Ontario Diabetes Database (ODD)
- Note: diabetes-specific reasons include diabetes with poor control, diabetes without complication, diabetes with hypoglycemia, diabetes with ketoacidosis, diabetes with hyperosmolarity, or a main diagnosis of diabetes with hyperglycemia or hypoglycemia

Percentage of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who delivered in hospital who have an intrapartum or antepartum outcome

- Stratify by:
  - Pre-eclampsia
  - Operative vaginal delivery

    - Third- or fourth-degree lacerations
    - Caesarean section
- Denominator: total number of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who delivered in hospital
- Numerator: number of people in the denominator who have an intrapartum or antepartum outcome
- Data sources: DAD, ODD

Percentage of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who delivered in hospital whose infant has an adverse neonatal outcome

- Stratify by:
    - Neonatal hypoglycemia
    - Macrosomia
    - Shoulder dystocia
    - Stillbirth
    - Preterm birth
    - Hyperbilirubinemia
    - Respiratory distress
    - Neonatal mortality
- Denominator: total number of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who delivered in hospital
- Numerator: number of people in the denominator whose infant has an adverse neonatal outcome listed above
- Data sources: DAD, ODD

Percentage of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who delivered in hospital whose infant is admitted to a neonatal intensive care unit for 24 hours or more

- Denominator: total number of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who delivered in hospital
- Numerator: number of people in the denominator whose infant is admitted to a neonatal intensive care unit for 24 hours or more
- Data sources: DAD, ODD

Indicators That Can Be Measured Using Only Local Data

Percentage of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who receive interprofessional care specific to their needs to manage their diabetes in pregnancy

- Denominator: total number of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes)
- Numerator: number of people in the denominator who receive interprofessional care specific to their needs to manage their diabetes in pregnancy
- Data source: local data collection
- Note: see quality statement 2 for stratifications of this indicator

Percentage of people of reproductive age living with diabetes who are planning to get pregnant who receive preconception care from an interprofessional care team

- Denominator: total number of people of reproductive age living with diabetes who are planning to get pregnant
- Numerator: number of people in the denominator who receive preconception care from an interprofessional care team
- Data source: local data collection

Percentage of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who receive care for their diabetes who feel involved in decisions about their own care

- Denominator: total number of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who receive care for their diabetes
- Numerator: number of people in the denominator who feel involved in decisions about their own care
- Data source: local data collection
- Note: This question is adapted from the Health Care Experience Survey. Consider using a validated diabetes patient experience survey that captures this concept to track this indicator

Percentage of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes) who report feeling confident in knowing how to take care of and manage their diabetes during pregnancy

- Denominator: total number of people with diabetes in pregnancy (pre-existing diabetes or gestational diabetes)
- Numerator: number of people in the denominator who report feeling confident in knowing how to take care of and manage their diabetes during pregnancy
- Data source: local data collection
- Note: This question is adapted from the Health Care Experience Survey. Consider using a validated diabetes patient experience survey that captures this concept to track this indicator

Quality Statement 1: Preconception Care for People With Diabetes

Percentage of people of reproductive age who might get pregnant who are living with diabetes who receive information about family planning from a health care professional

- Denominator: total number of people of reproductive age who might get pregnant who are living with diabetes
- Numerator: number of people in the denominator who receive information about family planning from a health care professional
- Data source: local data collection

Percentage of people of reproductive age living with diabetes who are planning to get pregnant who receive preconception care from an interprofessional care team

- Denominator: total number of people of reproductive age living with diabetes who are planning to get pregnant
- Numerator: number of people in the denominator who receive preconception care from an interprofessional care team
- Data source: local data collection

Percentage of people of reproductive age living with diabetes who are planning to get pregnant and who receive preconception care, who report feeling informed about how to manage their diabetes before and during pregnancy

- Denominator: total number of people of reproductive age living with diabetes who are planning to get pregnant and who receive preconception care
- Numerator: number of people in the denominator who report feeling informed about how to manage their diabetes before and during pregnancy
- Data source: local data collection
- Note: This question is adapted from the Health Care Experience Survey. Consider using a validated diabetes patient experience survey that captures this concept to track this indicator

Quality Statement 2: Coordinated Interprofessional Care

Percentage of people of reproductive age living with diabetes who are planning to get pregnant who receive interprofessional care specific to their needs during preconception

- Denominator: total number of people of reproductive age living with diabetes who are planning to get pregnant
- Numerator: number of people in the denominator who receive interprofessional care specific to their needs during preconception
- Data source: local data collection

Percentage of people with pre-existing diabetes who are pregnant who receive interprofessional care specific to their needs during pregnancy

- Denominator: total number of people with pre-existing diabetes who are pregnant
- Numerator: number of people in the denominator who receive interprofessional care specific to their needs during pregnancy
- Data source: local data collection

Percentage of people with gestational diabetes who receive interprofessional care specific to their needs at the time of gestational diabetes diagnosis and throughout the remainder of their pregnancy

- Denominator: total number of people with gestational diabetes
- Numerator: number of people in the denominator who receive interprofessional care specific to their needs at the following times:
    - At the time of gestational diabetes diagnosis
    - Throughout the remainder of their pregnancy
- Data source: local data collection

Local availability of integrated electronic health records that allow the interprofessional care team (including providers in hospital, primary care, and community care settings) to share information with each other

- Data source: local data collection

Percentage of people with diabetes in pregnancy who receive interprofessional care who feel involved in decisions about their own care

- Denominator: total number of people with diabetes in pregnancy who receive interprofessional care

- Numerator: number of people in the denominator who feel involved in decisions about their own care (their questions, concerns, observations, and goals are discussed and incorporated into their care)
- Data source: local data collection
- Note: This question is adapted from the Health Care Experience Survey. Consider using a validated diabetes patient experience survey that captures this concept to track this indicator.

Percentage of people with diabetes in pregnancy who receive interprofessional care who report that the model of care meets their individual needs and preferences

- Denominator: total number of people with diabetes in pregnancy who receive interprofessional care
- Numerator: number of people in the denominator who report that the model of care meets their individual needs and preferences
- Data source: local data collection

Quality Statement 3: Self-Management Education and Support

Percentage of people with pre-existing diabetes who are pregnant who receive tailored self-management education and support at the beginning of their pregnancy and throughout the remainder of their pregnancy

- Denominator: total number of people with pre-existing diabetes who are pregnant
- Numerator: number of people in the denominator who receive tailored self-management education and support at the following times:
    - At the beginning of their pregnancy
    - Throughout the remainder of their pregnancy
- Data source: local data collection

Percentage of people with gestational diabetes who receive tailored self-management education and support at the time of gestational diabetes diagnosis and throughout the remainder of their pregnancy

- Denominator: total number of people with gestational diabetes
- Numerator: number of people in the denominator who receive tailored self-management education and support at the following times:
    - At the time of gestational diabetes diagnosis
    - Throughout the remainder of their pregnancy
- Data source: local data collection

Percentage of people with diabetes in pregnancy who report feeling confident in knowing how to take care of and manage their diabetes during pregnancy

- Denominator: total number of people with diabetes in pregnancy
- Numerator: number of people in the denominator who report feeling confident in knowing how to take care of and manage their diabetes during pregnancy
- Data source: local data collection
- Note: This question is adapted from the Health Care Experience Survey. Consider using a validated diabetes patient experience survey that captures this concept to track this indicator.

Quality Statement 4: Lifestyle Management During Pregnancy

Percentage of people with pre-existing diabetes who are pregnant who receive tailored information and support for lifestyle management at the beginning of their pregnancy and throughout the remainder of their pregnancy

- Denominator: total number of people with pre-existing diabetes who are pregnant
- Numerator: number of people in the denominator who receive tailored information and support for lifestyle management (gestational weight gain, diet, and physical activity) at the following times:
    - At the beginning of their pregnancy
    - Throughout the remainder of their pregnancy
- Exclusion: people with contraindications for physical activity
- Data source: local data collection

Percentage of people with gestational diabetes who receive tailored information and support for lifestyle management at the time of gestational diabetes diagnosis and throughout the remainder of their pregnancy

- Denominator: total number of people with gestational diabetes
- Numerator: number of people in the denominator who receive tailored information and support for lifestyle management (gestational weight gain, diet, and physical activity) at the following times:
    - At the time of gestational diabetes diagnosis
    - Throughout the remainder of their pregnancy
- Exclusion: people with contraindications for physical activity
- Data source: local data collection

Percentage of people with diabetes in pregnancy who feel that their individualized lifestyle management plan meets their needs and abilities

- Denominator: total number of people with diabetes in pregnancy
- Numerator: number of people in the denominator who feel that their individualized lifestyle management plan meets their needs and abilities
- Data source: local data collection

Quality Statement 5: Fetal Monitoring and Timing of Delivery

Percentage of people with pre-existing diabetes, poorly controlled gestational diabetes, or gestational diabetes with comorbid conditions who receive fetal monitoring beginning at 32 weeks' gestation and conducted weekly starting from 36 weeks' gestation until delivery

- Denominator: total number of people with pre-existing diabetes, poorly controlled gestational diabetes, or gestational diabetes with comorbid conditions
- Numerator: number of people in the denominator who receive fetal monitoring at the following times:
    - At 32 weeks' gestation
    - Weekly starting from 36 weeks' gestation until delivery
- Data source: local data collection

Percentage of people with pre-existing diabetes without maternal or fetal indications who are induced between 38 and 39 weeks' gestation

- Denominator: total number of people with pre-existing diabetes without maternal or fetal indications

- Numerator: number of people in the denominator who are induced between 38 and 39 weeks' gestation
- Data sources: local data collection; consider using the Better Outcomes Registry and Network (BORN) Information System, if available

Percentage of people with either pre-existing diabetes or gestational diabetes who have maternal or fetal indications who are induced before 38 weeks' gestation

- Denominator: total number of people with either pre-existing diabetes or gestational diabetes who have maternal or fetal indications
- Numerator: number of people in the denominator who are induced before 38 weeks' gestation
- Data sources: local data collection; consider using the Better Outcomes Registry and Network (BORN) Information System, if available

Percentage or people with diabetes in pregnancy who report having discussions with their health care professional about fetal monitoring and the risks and benefits of the mode and timing of delivery

- Denominator: total number of people with diabetes in pregnancy
- Numerator: number of people in the denominator who report having discussions with their health care professional about fetal monitoring and the risks and benefits of the mode and timing of delivery
- Data source: local data collection

Quality Statement 6: Postpartum Diabetes Screening for People With Gestational Diabetes

Percentage of people with previous gestational diabetes who are screened for prediabetes and type 2 diabetes with a 75 g oral glucose tolerance test between 6 weeks and 6 months postpartum

- Denominator: total number of people with previous gestational diabetes
  - Exclusion: people who have undergone gastric bypass surgery
- Numerator: number of people in the denominator who are screened for prediabetes and type 2 diabetes with a 75 g oral glucose tolerance test between 6 weeks and 6 months postpartum
- Data sources: local data collection; if available, consider using a platform such as ConnectingOntario ClinicalViewer to identify people with gestational diabetes, people who had a delivery in a hospital, and people with contraindications, and the Ontario Laboratories Information System (OLIS) to identify people who received a 75 g oral glucose tolerance test at a community or hospital laboratory

Appendix 3: Glossary

Care providers: Regulated professionals and people in unregulated professions, such as administrative staff, behavioural support workers, personal support workers, recreational staff, and spiritual care staff.

Culturally appropriate care: Care that incorporates cultural or faith traditions, values, and beliefs; is delivered in the person's preferred language; adapts culture-specific advice; and incorporates the person's wishes to involve family or community members.[1]

Diabetes: Refers to type 1 and type 2 diabetes. Diabetes is a heterogeneous metabolic disorder characterized by the presence of hyperglycemia due to impairment of insulin secretion, defective insulin action, or both.

Family: The people closest to a person in terms of knowledge, care, and affection, and may include biological family, family through marriage, or family of choice and friends. The person defines their family and who will be involved in their care.

Gestational diabetes: An abnormal carbohydrate tolerance diagnosed, or first recognized, in the second or third trimester of pregnancy that was not clearly type 1 or type 2 diabetes before pregnancy.

Health care professionals: Regulated professionals, such as nurses, nurse practitioners, pharmacists, physicians, physiotherapists, psychologists, occupational therapists, social workers, and speech-language pathologists.

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About Health Quality Ontario

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- Finding the best evidence of what works, and
- Translating this evidence into clinical standards; recommendations to health care professionals and funders; and tools that health care providers can easily put into practice to make improvements.

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Quality Standards

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