Maternal Mental Health

Description

Percentage of women with mental health concerns during pregnancy.

Specific Indicators

- Percentage of women who experienced any mental health concern during pregnancy (includes anxiety, depression, history of postpartum depression, addiction, bipolar, schizophrenia or other)
- Percentage of women who experienced depression during pregnancy
- Percentage of women who experienced anxiety during pregnancy
- Percentage of women who previously gave birth that had a history of post-partum depression

Ontario Public Health Standards

The Ontario Public Health Standards (OPHS) establish requirements for the fundamental public health programs and services carried out by boards of health, which include assessment and surveillance, health promotion and policy development, disease and injury prevention, and health protection. The OPHS consist of one Foundational Standard and 13 Program Standards that articulate broad societal goals that result from the activities undertaken by boards of health and many others, including community partners, non-governmental organizations, and governmental bodies. These results have been expressed in terms of two levels of outcomes: societal outcomes and board of health outcomes. Societal outcomes entail changes in health status, organizations, systems, norms, policies, environments, and practices and result from the work of many sectors of society, including boards of health, for the improvement of the overall health of the population. Board of health outcomes are the results of endeavours by boards of health and often focus on changes in awareness, knowledge, attitudes, skills, practices, environments, and policies. Boards of health are accountable for these outcomes. The standards also outline the requirements that boards of health must implement to achieve the stated results.

Outcomes Related to this Indicator

- Board of Health Outcome (Reproductive Health): The board of health is aware of and uses epidemiology to influence the development of healthy public policy and its programs and services for the promotion of reproductive health.

- Board of Health Outcome (Foundational Standard): The public, community partners, and health care providers are aware of relevant and current population health information.

- Board of Health Outcome (Prevention of Injury and Substance Misuse): The board of health is aware of and uses epidemiology to influence the development of healthy public policy and its programs and services for the prevention of injury and substance misuse.

Available at: http://www.ontario.ca/publichealthstandards

Assessment and Surveillance Requirement Related to this Indicator:

- Reproductive Health: The board of health shall conduct epidemiological analysis of surveillance data... in the area of reproductive health outcomes.

- Prevention of Injury and Substance Misuse: The board of health shall conduct epidemiological analysis of surveillance data... in the areas of injury and substance misuse outcomes, including violence and suicide prevention.

Corresponding Indicators in Public Health Practice

Corresponding Health Indicators from Statistics Canada and CIHI

- None

Corresponding Indicator(s) from Other Sources

- The Maternal Experiences Survey (MES), 2006-2007: Percentage of women who scored 13 or higher on the Edinburg Postnatal Depression Scale (EPDS). The EPDS is a 10-item screening tool to identify postpartum depression at the time of its administration. A score of 13 or higher on the EPDS is considered indicative of postpartum depression and a score of 10 to 12 is indicative of being at risk for postpartum depression. The MES was a national self-reported telephone survey of Canadian women's experiences, perceptions, knowledge and practices before conception, during pregnancy and birth, and the early months of parenthood. Available at: http://www.phac-aspc.gc.ca/rhs-ssg/survey-eng.php

Data Source

Numerator & Denominator: BORN Information System (BIS)
Original Source: Better Outcomes Registry Network (BORN) Ontario
Distributed by: Better Outcomes Registry (BORN) Ontario
Suggested citation (see Data Citation Notes): BORN Information System [years], Date Extracted: [date].

Alternative Data Sources

- Healthy Babies Healthy Children Integrated Services for Children Information System (HBHC-ISCIS):
    - Percentage of HBHC Clients and/or parenting partners with a history of depression, anxiety or other mental illness.
- The Healthy Babies Healthy Children (HBHC) screening tool was developed by the Ministry of Children and Youth Services and is a comprehensive tool for identifying families with potential risk of negative developmental outcomes for children. The screening tool asks a question regarding mental health which is collected in the Integrated Services for Children Information System (ISCIS).

  NOTE: the ISCIS database only collects data on families that give consent for the HBHC program and thus does not represent all births within a geographical area. Also, the data

collected in the HBHC system does not differentiate between which parenting partner had a history of mental illness, thus cannot specifically distinguish as 'maternal' mental health

Data Elements in the BORN Information System (BIS)

Name	BORN ID	Description	Categories	Encounter
Mental Health Concerns	M0048	Indicates the presence of a mental health concern in this pregnancy	None, Anxiety, Depression, History of postpartum depression, addiction, bipolar, schizophrenia, other	Labour, Birth (Mother), Antenatal General, Antenatal Specialty

Data Elements in the BORN Information System (BIS)

Dimension	Categories
Mental Health Concern	None, Anxiety, Depression, History of Postpartum Depression, Addiction, Bipolar, Schizophrenia, Other, Missing Data
Anxiety	Yes, No, Missing Data
Depression	Yes, No, Missing Data
History of Post Partum Depression	Yes, No, Missing Data
Parity	1, 2, 3-4, ≥5, Missing Data
Newborn DOB Calendar	2013, 2014, etc.

Analysis Check List

- BORN data are available to PHUs by custom request and through the BORN Ontario reporting environment as Public Health Standard Reports and the Public Health Cube. All users are required to sign a data sharing agreement and adhere to strict privacy and security measures.
- Refer to the BORN Information System (BIS) resource for more information about the data and the BORN Data Dictionary for a list and description of data elements captured in the BIS.
- For key information used by the Reproductive Health Sub-Group (RHSG) in their revision of the reproductive health core indicators and accompanying resources, refer to the Reproductive Health Core Indicators Documentation Report.
- Niday Perinatal Data (i.e., data prior to April 1, 2012) is available from BORN upon request; however, the mental health variable was not defined the same way as the corresponding data element in the BIS and may not give consistent results over the two time periods.

    - The BORN licensing agreement with health units does not require suppression of small cells however BORN recommends the suppression of cells less than 6, although zero counts may be presented. This practice decreases the risk of re-identifying individuals. In general, caution should be used when reporting data at a level that could identify individuals (e.g., reporting at the dissemination area by maternal age)."
    - Aggregation (combining years, age groups, geographic levels, categories or pick-list items) should be considered for small numbers.
- In general, analyze by mother's residence, not place of infant's birth. The standard reports and cube are tabulated by maternal residence. Ontario births include only Ontario residents and exclude births to mothers that reside out-of-province.
- Data available represents all data that has been entered, submitted and acknowledged into the BIS as of the time of extraction and as such, the numbers are subject to change. The BIS is a live database. For any analysis of the BIS, ensure that all or a majority of hospitals and midwifery practice groups in your area have acknowledged their data.
- Caution should be taken when interpreting data if the percentage of "missing data" is greater than 5%. BORN Ontario recommends not reporting data if the missing is 30% or more. See "Indicator Notes" below for more information.
- Although the BIS was launched in January 2012, data may not be complete for some elements and geographical areas in that first year. It is recommended that analysis begin for calendar year 2013.
- In the Public Health Standard Reports, comparator data for Ontario or Peer Group is only available for six months prior to the date of extraction. Public Health Units are categorized into Peer Groups as per the 2011 classifications.
- Occurrences of different types of mental health concerns during pregnancy are not mutually exclusive; therefore, the total number of mental health concerns may be greater than the total number of women with one or more mental health concerns.
- The denominator for the 'History of post-partum depression' indicator should be limited to those that have had a previous birth (parity > 0; (note that a limitation of using this denominator is that it excludes those that had a previous stillbirth or pregnancy loss)). This has been indicated in the instructions for the Public Health Standard Reports and Public Health Cube below.
- If using the Public Health Standard Reports:
    - Select the PHU-Pregnancy report under Clinical Reports
    - Specify the dates/years of analysis
    - Go to the link for 'Frequency mental health concerns during pregnancy, by public health unit and province'
    - Calculate the percentages from the standard report or export the table to Excel
        - Note: the percentage of women that have a history of postpartum depression that is presented in the standard report uses a denominator that includes all women who have given birth (it is not just restricted to those that have had a previous birth). This should be adjusted for in your own calculations by using the number of women that have had a previous birth (found in the parity section of the standard report; parity > 0) as the denominator (note that a limitation of using this denominator is that it excludes those that had a previous stillbirth or pregnancy loss).
- If using the Public Health Cube:

  For women who experienced any mental health concern during pregnancy, and for women who experienced anxiety and depression during pregnancy:

- Select Dimension: “Mental Health Concern” (found under Dimension > Pregnancy > Maternal Health History > Mental Health Concern)
- Select Measure: “# of Pregnancies – Women Who Gave Birth” (found under Measures > Pregnancy)
- Specify Filters by right clicking on each of the following dimensions and selecting the following categories:
  - Newborn DOB Calendar (found under Newborn DOB > Newborn DOB Calendar) = Deselect 2012 (and others as appropriate for your analysis)
- To calculate the total number of unique women with any mental health concern, take the total number of pregnancies and subtract those with “none” and “missing” (it is not recommended to use the number of women who answered “yes” to having a mental health concern because occurrences of different types of mental health concerns during pregnancy are not mutually exclusive; therefore, the total number of mental health concerns may be greater than the total number of women with one or more mental health concerns.
- Calculate percentages within the Cube or export to Excel

For women who have a history of postpartum depression(experienced postpartum depression during a previous pregnancy):

- Select Dimension: “Mental Health Concern” (found under Dimension > Pregnancy > Mental Health Concerns > History or Post Partum Depression)
- Select Measure: “# of Pregnancies – Women Who Gave Birth” (found under Measures > Pregnancy)
- Add filters to the tables and specify by right clicking on each of the following dimensions and selecting the following categories:
  - Newborn DOB Calendar (found under Newborn DOB > Newborn DOB Calendar) = Deselect 2012 (and others as appropriate for your analysis)
  - Parity (found under Dimensions > Pregnancy > Pregnancy History > Parity) = Parity 1, Parity 2, Parity 3-4, Parity ≥ 5
- Calculate percentages within the Cube or export to Excel

Method of Calculation

Percentage of women who experienced any mental health concern during pregnancy
[Number of women who gave birth (live or still) who experienced any mental health concern during pregnancy/ Total number of women who gave birth (live or still)] x 100

NOTE: includes pregnant females who experienced anxiety, depression, history of postpartum depression, addiction, bipolar, schizophrenia, other

Percentage of women who experienced depression during pregnancy
[Number of women who gave birth (live or still) who experienced depression during pregnancy / Total number of women who gave birth (live or still)] x 100

Percentage of women who experienced anxiety during pregnancy
[Number of women who gave birth (live or still) who experienced anxiety during pregnancy/ Total number of women who gave birth (live or still)/ x 100

Percentage of women who had a history of postpartum depression

[Number of women who gave birth (live or still) who have a history of postpartum depression/ Total number of women who gave birth (live or still) that have had a previous birth] x 100

NOTE: exclude women that gave birth (live or still) that have a parity of 0

Basic Categories

- Geographic areas of patient residence: Ontario, public health unit

Indicator Comments

- Maternal mental health is an important indicator of health because maternal anxiety and depression and other mental health conditions can have negative effects on both the women's health, as well as the wellbeing of her baby and family. Increased awareness of the issues can help ensure proper care and treatment which will help to minimize these effects (1-4). Furthermore, public health has been recently recognized as having the potential to play a uniquely effective role in reducing the negative impacts of perinatal mood disorders (4).
- Maternal depression and anxiety is considered a risk factor for the socio-emotional and cognitive development of children. Research has also shown that maternal mental health problems in pregnancy and/or the postpartum period increase the likelihood that school age-children experience suboptimal global, behavioural, cognitive, and socio-emotional development (5). The partners of mothers who are depressed also experience more stress and depression (1,6).
- Maternal mental health concerns may start during pregnancy or at any time up to one year after the birth of a child (7); as many as 19.2% of women experience a depressive episode during the first 3 months post-partum (8).
- Every woman is vulnerable to mental health problems during pregnancy or postpartum, but there are certain factors such as poverty, single status, minority ethnicity, and a history of depression can increase the risk (9,10). LGBTQ women may also be predisposed to maternal mental health concerns due to issues related to difficulty conceiving, social support, the couple relationship, and legal and policy barriers (11, 12)
- Risk factors for postpartum depression specifically include: a history of mood disorders, depression symptoms during the pregnancy and a family history of psychiatric disorders; younger maternal age, stress factors such as negative life events; poor marital relationships; having a special needs infant or medically fragile infant; lack of social support; tobacco use or drug abuse during pregnancy; and personal and family psychopathology (13,14) .
- About half of all women with a previous history of depression will experience maternal depression, and 30% of women diagnosed with postpartum depression had their initial onset of depression during pregnancy (15).
- It is natural for women postpartum to experience feelings of sadness and it occurs in approximately 50-80% of women. These feeling are sometimes referred to as "baby blues". However, a woman is diagnosed with depression if she experiences these disturbing moods, feelings, and behaviors nearly every day for two weeks that

significantly interfere with her ability to care for herself, her other children, her home, and her work (7,16).

- A history of postpartum depression does not necessarily indicate a mental health concern during the current pregnancy. However, a previous experience with a perinatal mood or anxiety disorder such as post-partum depression increases one's risk of experiencing it again; the risk for post-partum depression increases to 25%-30% with a prior history of postpartum depression (15,17). Therefore, this indicator includes a history of postpartum depression as a maternal mental health concern.
- The terms 'maternal mental health' and 'postpartum depression' are used throughout this indicator document because that is how it is referenced in the data source (BORN); however, it is acknowledged that 'perinatal mood disorder' and 'postpartum mood disorders' are appropriate alternatives.
- This indicator largely focuses on the mental health of the mother during and post-pregnancy due to the availability of the data; however, the preconception period (before pregnancy) is also an important predictor of pregnancy complications and adverse birth outcomes. (12, 18)
- Maternal mental health variables from BORN capture any maternal mental health concerns during pregnancy, including those pre-existing, diagnosed during pregnancy or active during pregnancy, both diagnosed or self-reported (19). Maternal mental health variables from BORN are self-reported and thus subject to under-reporting and social desirability bias.
- It is important to understand the degree of missing data for mental health concern data from BORN for your health unit prior to reporting on it. The total missing for maternal mental health concerns for Ontario in 2013 was 5.2% in 2013 and 2.1% in 2014. By Public Health Unit, the total missing for mental health concerns ranged from 0.1% to 14.8% in 2013 and from 0.1% to 6.8% in 2014 (20).

Cross-References to Other Indicators

Depression prevalence (Section 7)

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Changes Made

Date	Type of Review	Changes Made By	Changes Made
June 2016	New indicator	Reproductive Health Sub-Group	New indicator

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