

Maternal Mental Health Concerns

Indicator Type: Core Indicator

Description

- **Mental Health Concern During Pregnancy:** Percentage of women* who experienced any mental health concern during pregnancy (including anxiety, depression, history of postpartum depression, addiction, bipolar, schizophrenia or other)
- **Depression During Pregnancy:** Percentage of women* who experienced depression during pregnancy
- **Anxiety During Pregnancy:** Percentage of women* who experienced anxiety during pregnancy
- **History of Postpartum Depression:** Percentage of women* who previously gave birth and had a history of postpartum depression

** The term “women” is used throughout this document to stay consistent with the data source. People with various gender identities can get pregnant and have children and are included in the data.*

Related OPHS Topics

Healthy Pregnancies

Mental Health Promotion

Method of Calculation

Mental Health Concern During Pregnancy: Percentage of women who experienced any mental health concern during pregnancy, by total number of women who gave birth (live or still)

$$\frac{\text{Number of women who gave birth (live or still) who experienced any (one or more) mental health concern during pregnancy (including anxiety, depression, history of postpartum depression, addiction, bipolar, schizophrenia, or other)}}{\text{Total number of women who gave birth (live or still)}} \times 100\%$$

Total number of women who gave birth (live or still)

Depression During Pregnancy: Percentage of women who experienced depression during pregnancy, by total number of women who gave birth (live or still)

Total number of women who gave birth (live or still) who experienced depression during pregnancy

x 100%

Total number of women who gave birth (live or still)

Anxiety During Pregnancy: Percentage of women who experienced anxiety during pregnancy, by total number of women who gave birth (live or still)

Total number of women who gave birth (live or still) who experienced anxiety during pregnancy

x 100%

Total number of women who gave birth (live or still)

History of Postpartum Depression: Percentage of women who had a previous birth and experienced a history of postpartum depression, by total number of women who gave birth who had a previous birth

Total number of women who gave birth (live or still) who had a previous birth and experienced a history of postpartum depression

x 100%

Total number of women who gave birth (live or still) who had a previous birth

NOTE: this analysis is limited to those who had a previous birth (i.e., include only those with parity ≥ 1 and exclude where parity = 0 or is missing)

Recommended Subset Analysis Categories

Age Groups

- 15-24, 25-34, 35+

Parity (not applicable to *History of Postpartum Depression*):

- 0
- 1 or more

Geography (residence at time of live/stillbirth)

- Ontario
- Public Health Unit
- Municipality (based on aggregated dissemination area)
- Smaller areas of geography (based on aggregated dissemination areas)

Temporal

- Year
- Quarter or Month (as needed by Public Health Unit)

Data Source(s) Table

Numerator & Denominator
<p data-bbox="196 485 722 615">BORN Information System (BIS)</p>
<p data-bbox="186 730 354 758">Original Source:</p> <p data-bbox="186 791 691 819">Better Outcomes Registry & Network (BORN) Ontario</p>
<p data-bbox="186 911 337 938">Distributed by:</p> <p data-bbox="186 972 691 999">Better Outcomes Registry & Network (BORN) Ontario</p>
<p data-bbox="186 1094 625 1121">Suggested Citation (see Data Citation Notes)</p> <p data-bbox="186 1155 773 1182"><u>When using Public Health Unit Analytic Reporting Tool (Cube):</u></p> <p data-bbox="186 1215 938 1243">BORN Information System [month, year - month, year], Extracted: [month, year].</p> <p data-bbox="186 1276 477 1304"><u>When using Standard Reports:</u></p> <p data-bbox="186 1337 1068 1390">[Name of Standard report], BORN Information System [month, year - month, year], Extracted: [month, year].</p> <p data-bbox="186 1423 1057 1476">Example: PHU-Pregnancy Standard Report, BORN Information System (BIS), [month, year - month, year], Extracted: [month, year].</p>

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. **It is therefore recommended to use BORN data for reporting mental health concerns during pregnancy, as BORN captures most mothers and babies born in Ontario, while HBHC Screen is a more restricted sampling frame.**

BIS Data Elements

Dimension	Name and Description	Categories	Encounter	BORN ID
Pregnancy > Maternal Health History	Mental Health Concerns Indicates the presence of any mental health concerns in this pregnancy, including those pre-existing, diagnosed during pregnancy or active during pregnancy. Includes diagnosed and self-reported.	<ul style="list-style-type: none"> ● None ● Anxiety ● Depression ● History of Postpartum Depression ● Addiction ● Bipolar ● Schizophrenia ● Other ● Missing data 	Labour & Birth Mother, Antenatal General	M0048
Pregnancy > Mental Health Concerns	Anxiety	<ul style="list-style-type: none"> ● Yes ● No ● Missing Data 	N/A	N/A
Pregnancy > Mental Health Concerns	Depression	<ul style="list-style-type: none"> ● Yes ● No ● Missing Data 	N/A	N/A
Pregnancy > Mental Health Concerns	History of Post Partum Depression	<ul style="list-style-type: none"> ● Yes ● No ● Missing Data 	N/A	N/A
Pregnancy > Maternal Characteristics	Maternal Age Group	<ul style="list-style-type: none"> ● <20 ● 20-24 ● 25-29 ● 30-34 ● 35-39 ● 40-44 ● ≥45 ● Missing data 	N/A	N/A
Pregnancy > Pregnancy History	Parity Indicates the number of	<ul style="list-style-type: none"> ● 0 ● 1 ● 2 	Antenatal General, Healthy Babies	NEW110 1

	deliveries (including live births and stillbirths) where pregnancies reached viable gestational age (minimum 20 weeks). When completed postnatally, parity includes current birth for HBHC.	<ul style="list-style-type: none"> • 3-4 • ≥5 • Missing Data 	Healthy Children, Labour & Birth Mother	
Newborn DOB	Newborn DOB Calendar	<ul style="list-style-type: none"> • 2013 - Present • Note: can also filter by year, quarter, or month if required 	N/A	N/A
Newborn > Location	Dissemination Area	[By specific Dissemination Area for sub-PHU geographic area analysis, such as by municipality or smaller geographic areas]	N/A	N/A

Analysis Checklist

- **General Notes**

- 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 [Using BORN Ontario Data for Public Health Surveillance – User Guide](#) and 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.
- Data from the Legacy Datasets (birth data prior to April 1, 2012) are available from BORN upon request. However, not all data elements available in BORN are available in the legacy datasets.
- Although the BIS was launched in April 2012, data may not be complete for some elements and geographical areas in that first year. It is recommended that analysis begin for the calendar year 2013.
- The BORN licensing agreement with health units does not require suppression of small cells; however, BORN recommends the suppression of cells five or less, 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 when dealing with small cell counts.
- 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 in the Standard Reports represents all data that has been entered, submitted and acknowledged into the BIS as of the time of extraction. Data in the PHU Analytics cube is based on submitted data only. As such, the numbers are subject to change as organizations continue to submit, acknowledge, and fix errors in their data.
 - The date of extraction must be included in the data source citation. The date of extraction is not automatically recorded when the user exports BIS data; the user must add it.
 - For any analysis of the BIS, ensure that all (or most) hospitals and midwifery practice groups in your area have acknowledged their data. BORN aims to have all organizations acknowledge their data within 3 months of the fiscal year-end.
 - Every PHU standard report starts with a month-end data acknowledgement summary that can be used to verify the proportion of hospitals/midwife practice groups that have acknowledged their data in your area.
 - Please note: midwife-attended hospital births must have acknowledgement from both the hospital AND the midwifery practice group in order for the month to show as acknowledged in the PHU acknowledgement report. Unacknowledged data does not necessarily mean that the data is missing, it has just not been signed off by the submitting organization.
 - Caution should be taken when interpreting data if the percentage of “missing data” for a particular data element is $\geq 10\%$. BORN Ontario recommends not reporting data if the missing data is $\geq 30\%$.
 - In the Public Health Standard Reports, comparator data is provided for Ontario. This comparator is only available for six months prior to the date of extraction. The Ontario comparator includes all PHUs.
- **Notes specific to these indicators:**
 - 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 concern.
 - The analysis for the ‘History of post-partum depression’ indicator should be limited to those that have had a previous birth (parity ≥ 1) and exclude those with parity=0 or where parity is missing.
 - Includes diagnosed and self-reported maternal mental health concerns including those pre-existing, diagnosed during pregnancy or active during pregnancy.
 - **If using the Public Health Standard Reports:**
 - Select the PHU-Pregnancy report under Clinical Reports
 - Specify the months/years of analysis and select your PHU
 - Go to the link for ‘Frequency of mental health concerns during pregnancy, by public health unit and province’
 - Calculate the percentages from the standard report or export the table to Excel
 - **Notes:**
 - **For Mental Health Concern During Pregnancy:** Use the element of “Total women with mental health concerns” presented in the standard report.
 - **For History of Post Partum Depression:** it is not recommended to calculate this indicator using the standard reports. This is because analysis needs to be limited to those with parity ≥ 1 .
 - **If using the Public Health Cube:** Click on “Analytical Report Tool” and “Launch Analytical

Report Tool”

- **For percentage of women who gave birth who experienced any mental health concern during pregnancy:**
 - Select Dimension of interest: “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)
 - Add filters to the tables and specify by right clicking on each of the following dimensions and selecting the following categories:
 - Maternal Age Group (found under Dimension > Pregnancy > Maternal Characteristics) = <20, 20-24, 25-29, 30-34, 35-39, 40-44, ≥45
 - Newborn DOB Calendar (found under Dimension > 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 Women who gave Birth and subtract those with “none” and “missing” (it is not recommended to use the sum of the number of individuals by type of mental health concern (anxiety, depression, history of postpartum depression, addiction, bipolar, schizophrenia, other) 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 unique women with one or more mental health concerns).
- Calculate percentages within the Cube or export to Excel
- **For percentage of women who gave birth who experienced anxiety or depression during pregnancy:**
 - Select Dimension of interest: “Anxiety” or “Depression” (found under Dimension > Pregnancy > Mental Health Concerns)
 - 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:
 - Maternal Age Group (found under Dimension > Pregnancy > Maternal Characteristics) = <20, 20-24, 25-29, 30-34, 35-39, 40-44, ≥45
 - Newborn DOB Calendar (found under Dimension > Newborn DOB Calendar) = Deselect 2012 and others as appropriate for your analysis
 - Calculate percentages within the Cube or export to Excel
- **For percentage of women who have a history of postpartum depression (experienced postpartum depression during a previous pregnancy):**
 - Select Dimension of interest: “History Of Post Partum Depression” (found under Dimension > Pregnancy > Mental Health Concerns)
 - Select Measure: “# of Pregnancies – Women Who Gave Birth” (found under Measures > Pregnancy)
 - Parity (found under Dimension > Pregnancy History > Parity) = 1, 2, 3-4, ≥5; deselect Parity = 0 and Missing
 - Add filters to the tables and specify by right clicking on each of the following dimensions and selecting the following categories:
 - Maternal Age Group (found under Dimension > Pregnancy > Maternal

- Characteristics) = <20, 20-24, 25-29, 30-34, 35-39, 40-44, ≥45
 - Newborn DOB Calendar (found under Dimension > Newborn DOB Calendar) = Deselect 2012 and others as appropriate for your analysis
- Calculate percentages within the Cube or export to Excel

Indicator Comments

- Maternal mental health concerns may start during pregnancy or at any time up to one year after the birth of a child [1]; as many as 19.2% of women experience a depressive episode during the first 3 months postpartum [2].
- This indicator is specific to mental health concern(s) experienced during pregnancy and does not capture those who develop anxiety, depression, or other mental health concern(s) in the postpartum period.
- 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 postpartum depression increases one's risk of experiencing it again; the risk for postpartum depression increases to 25%-30% with a prior history of postpartum depression [3,4]. 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).
- 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 [5]. 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 data proportion for maternal mental health concerns for Ontario in 2024 was 2.9% and 2.6% in 2023. [6]

Cited References

1. Canadian Mental Health Association . Postpartum Depression. Toronto, 2015. Available at: <https://www.camh.ca/en/health-info/mental-illness-and-addiction-index/postpartum-depression>
2. Gavin NI, Gaynes BN, Lohr KN, Meltzer-Brody S, Gartlehner G, Swinson T. Perinatal depression: a systematic review of prevalence and incidence. *Obstet Gynecol*. 2005 Nov; 106: 1071-83.
3. Wisner KL, Perel JM, Peindl KS, Hanusa BH. Timing of depression recurrence in the first year after birth. *J Affect Disord*. 2004; 78(3): 249-252.
4. Steward DE, Robertson E, Dennis C-L, Grace S, Wallington T. Postpartum Depression: Literature Review of Risk Factors and Interventions. 2003.
5. BORN Ontario. BORN Data Dictionary Maternal Mental Health Data Definition. Available at: <https://www.bornontario.ca/data/data-dictionary/data-dictionary-search/?q=Mental+Health+Concerns>
6. BORN Information System. Distribution of Percentage of Missing Data for Maternal

Mental Health Concerns by Public Health Unit for 2021-2024. Extracted from BORN Information System on July 17, 2025 (from Pregnancy Standard Report).

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Revision History

Date	Type of Review	Changes Made By	Changes Made
Mar 2026	Formal Review	Reproductive Health Sub-Group	Reviewed document to ensure accuracy with data source and

			consistent wording across indicators. Condensed indicator comments and related sources.
June 2016	New indicator	Reproductive Health Sub-Group	New indicator