

# WHAT ARE THE MATERNAL AND CHILD HEALTH IMPACTS OF CANNABIS USE DURING PREGNANCY?



## INTRODUCTION

Cannabis usage across Canada has been increasing since legalization.<sup>29, 30, 31</sup>

- 27% of Canadians over 16 reported use in last 12 months in 2022<sup>15</sup>
- Most common age group reporting cannabis use in last 12 months: 20-24<sup>14, 15</sup>

In Canada, **cannabis is the most commonly used psychoactive drug in pregnancy**, with some evidence suggesting preconception use has **increased** since legalization.<sup>5, 27</sup>



## PROBLEM STATEMENT

Despite growing cannabis use in the general Canadian population and among pregnant women, **little is commonly known about the effects of use during pregnancy.**



## METHODS

### Search strategy:

- **Design:** Research team followed a **systematic review** approach to identify patterns in current literature
- **Dates and databases:** **October 2023** using **CINAHL, ProQuest Public Health, PubMed**
- **Inclusion criteria:** Publishing dates **2018-2023**, **peer-reviewed journals** only
- **Search terms:**
  - **Cannabis:** "Cannabis, marijuana, pot, weed, tetrahydrocannabinol or THC, cannabidiol or cbd"
  - **Maternal health:** "Maternal\*; postpartum depression; postnatal depression; ppd; pnd; postpartum psychosis; preconception health; preeclampsia, eclampsia; pregnant; prenatal; antenatal; perinatal"
  - **Fetal health:** "fetal development, fetal health, fetal growth"
- **Initial search results:** CINAHL, 330; PubMed, 275; ProQuest, 103
- **Final sample:** **21 primary research articles from Canada, the US, and Australia were selected.** Secondary research and health authority information was used to supplement primary findings.

### Research terminology:



**Cannabis use:** "any frequency of usage" with "any form of consumption."

**Cannabis metabolites** tetrahydrocannabinol (THC) and cannabidiol (CBD) were studied

**Pregnancy:** Preconception period (up to 15 months prior to conception) to postpartum period (first year following birth, including chestfeeding)



## RESULTS

\*\*Note: Throughout the literature on this topic, there is some conflicting evidence regarding maternal and offspring effects.



## MATERNAL

### Risk factors for continued cannabis use during pregnancy:

- **Low education level and socioeconomic status**<sup>7</sup>
- Current mental health disorders including **depression and anxiety**<sup>9, 21</sup>
- **Stressful life events** during the year prior to childbirth<sup>2</sup>

Self-reported reasons for **continued use** include treatment of **nausea, poor sleep, anxiety, and pain.**<sup>7, 22</sup>

### Increased risk of complications:

- ↑ Maternal **epidural rates**<sup>9</sup>
- Maternal **asthma**<sup>9</sup>
- **Postpartum depression**<sup>8</sup>
- Gestational **hypertension and preeclampsia**<sup>9, 26</sup>



## OFFSPRING

Figure 1: Prevalence of neonatal impacts of prenatal & antenatal cannabis use across primary studies (n=6)

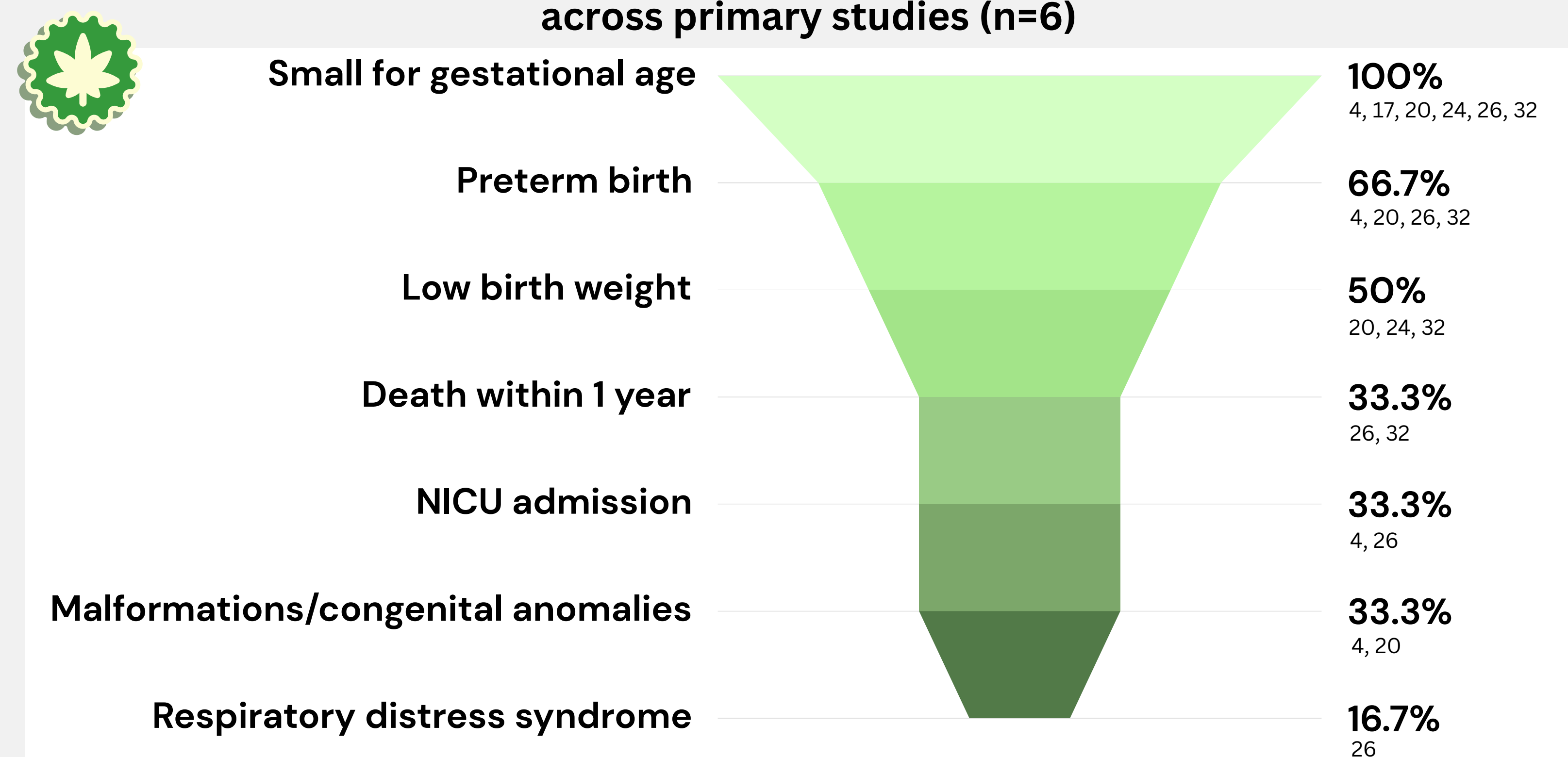


Figure 1: 6 different primary studies were examined to identify how often **statistically significant positive correlations** for the above-mentioned neonatal health impacts were identified in the literature

THC can affect amniotic sac development and cross the placental barrier<sup>4, 19, 24</sup>



THC and CBD can remain in breast milk for up to 6 days<sup>6, 18, 23</sup>



## CONCLUSION AND RECOMMENDATIONS

- **Cannabis use during pregnancy and chestfeeding should be discouraged.**<sup>1, 10, 18</sup>
- Prenatal education regarding the risks of cannabis use and cessation resources should be provided to all parents.<sup>9, 21, 22</sup>
- Further studies on the effects of cannabis during pregnancy should be conducted.



### Potential Childhood Outcomes:

- Autism spectrum disorder<sup>11</sup>
- ADHD, learning disorders, and intellectual disability<sup>11, 25, 28</sup>
- Depression and anxiety<sup>12, 28</sup>
- Delinquent and aggressive behaviour<sup>12, 13, 25, 28</sup>
- Psychotic-like experiences<sup>25</sup>

### Cannabis Use when Chestfeeding:

- Infant may be exposed to **2.5% of the maternal dose**<sup>3</sup>
- Infant may experience **drowsiness and difficulty latching**<sup>1</sup>



Concurrent tobacco use can increase risk and severity of maternal and offspring health impacts

<sup>4, 8, 9, 17, 19, 24</sup>