## Postpartum psychiatric hospital admissions: A population-based study from British Columbia BC WOMEN'S HOSPITAL+ HEALTH CENTR Catriona Hippman<sup>1, 2, 3, 4</sup>, Paramdeep Kaur<sup>1</sup>, Deirdre Ryan<sup>1,3</sup>, Gillian Hanley<sup>1, 4, 5</sup> RESEARCH INSTITUTE





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## **Clinical Context**



- Currently, postpartum people in Canada requiring inpatient care for psychiatric illness will be separated from their babies for hospital admissions.
- We know from clinical experience and research in the UK (Griffiths et al., 2019) that this separation is traumatic for parents, and detrimental to parent-infant bonding.
- Past research has found rates of postpartum psychiatric hospital admissions of:
  - 1.03 / 1,000 births Denmark, Munk-Olsen et al., 2006
  - 8.00 / 1,000 births Australia, Betts et al., 2020

## **Research Question**

What is the current landscape with respect to care for acute postpartum psychiatric illness in Canada?

1.	What is the <b>rate</b> of hospitalization for acute postpartum psychiatric illness in the first year postpartum?
2.	What are characteristics of these hospitalizations?
3.	What are predictors of these hospitalizations?

## Methods: Retrospective, population-based study

BC perinatal data registry data
2015-2019
Discharge Abstract Database
Medical Service Plan (MSP)
CENSUS
PharmaNet
Registry

Data were analyzed using descriptive statistics and logistic regression modelling.

# Over a 5-year period in BC, there was a postpartum psychiatric hospitalization rate of 4.3/1000 deliveries.

# **Risk factors for postpartum** psychiatric hospital admissions:

1. Younger age 2. Multiparity 3. Short first stage of labor 4. Low newborn APGAR score 5. Pre-term baby admitted to the NICU 6. Psychiatric history

## Results

### Rate

- Total number of deliveries = **218,226**
- After data cleaning = **189,530**
- 812
- of births; 4.3 per 1000 births

### Characteristics

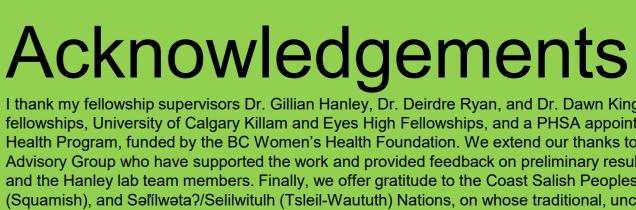
did not.

Inpatient admission by diagnosis in postpartum period	All postpartum admissions n (%)	Number of birthing people readmitted to hospital in postpartum period n (%)	Length of hospital stay (days) Median (Min – Max)	Median timing of hospital stays relative to delivery (days) Median (Min – Max)
All psychiatric diagnoses	812 (100)		3 (0-111)	159 (1-364)
Anxiety	15 (1.8)	<5 (6.7)	1 (0-15)	239 (8-343)
PTSD	19 (2.3)	6 (31.6)	3 (0-21)	197 (13-339)
OCD	<5 (0.4)	<5 (33.3)	6 (0-37)	235 (36-338)
GAD	21 (2.6)	<5 (9.5)	3 (0-24)	219 (3-341)
Panic disorder	73 (9.0)	11 (15.1)	2 (0-30)	166 (2-360)
Depression	233 (28.7)	34 (14.6)	3 (0-63)	143 (1-362)
Personality disorder (excluding borderline)	16 (2.0)	<5 (18.7)	2 (0-44)	201 (19-335)
Borderline personality disorder	41 (5.0)	7 (17.1)	3 (0-20)	170 (9-358)
Bipolar disorder	62 (7.6)	14 (22.6)	10.5 (0-41)	118 (4-358)
Psychosis	47 (5.8)	<5 (10.6)	9 (0-62)	111 (6-346)
Schizophrenia	21 (2.6)	6 (28.6)	15 (0-111)	127 (6-347)
Substance-Related Disorders	234 (28.8)	66 (28.2)	3 (0-108)	168.5 (1-364)
Other Disorders	27 (3.3)	<5 (11.1)	4 (0-26)	167 (6-355)

<u>Predicto</u>	<u>rs</u>			Adjusted		Adjusted odds ratio
			odds ratio			(95% CI)
				(95% CI)	Smoked during	1.76
Adjusted			Duration of first stage of labour		pregnancy	(1.42-2.17)
	odds ratio				Psychiatric hospital	2.05
	(95% CI)	Q1	Q1	1.53	admission –	(1.51-2.78)
Maternal age				(1.10-2.12)	2 years	
<20	4.93		Q2	1.19	preconception	
~20		<b>3.54-6.87)</b> Q3 1.22	(0.85-1.68)	Psychiatric hospital	4.27	
20-24	(3.54-6.87) 2.45		Q3	1.22	admission – during pregnancy	(2.75-6.63)
20-24				(0.87-1.71)		
25-29	(1.91-3.14) 1.82		Q4	1.28		
25-29				(0.92-1.79)	Peychiatric modica	tion uso during
30-39	<b>(1.52-2.19)</b> Ref		Q5	Ref	Psychiatric medication use during pregnancy	
			Apgar score	1.52	Antidepressant use	1.55
≥ 40	1.10		<7 at 5	(1.11-2.09)		(1.18-2.02)
Darity	(0.76-1.61)		minutes		Antipsychotic use	2.09
Parity	4.20		Pre-term	-term 1.62		(1.50-2.91)
·	1.39		babies admitted to	(1.22-2.15)	Aprialutia usa	2.22
	(1.18-1.64)				Anxiolytic use	
Primiparous	Ref		NICU			(1.69-2.92)

## Conclusions

Risk factors identified in this analysis could support clinicians to identify those at high risk of acute postpartum psychiatric illness, which could support early intervention and avoid the need for hospitalization.



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Number of postpartum psychiatric hospital admissions =

• Rate of postpartum psychiatric hospital admission: 0.43%

Of those admitted for psychiatric illness within 1 year following delivery, 70% had a history of psychiatric illness 2 years before conception or during pregnancy, while 30%

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