

## Relationship between obesity and lower rates of breastfeeding initiation in regional Victoria, Australia: an 8-year retrospective panel study

Melanie Bish, Fiona Faulks, Lisa H Amir, David H McIntyre, Rachel R Huxley, Rachel James, George Mnatzaganian

### Supplementary tables

**Supplementary Table 1: Not breastfeeding during hospital stay by BMI category, year of birth, and type of birth: % per birth**

	N	All	BMI < 18.5	BMI 18.5 – 24.9	BMI 25.0 – 29.9	BMI 30.0 – 34.9	BMI 35.0 – 39.0	BMI 40.0 +	P value
<b>Year of birth</b>									
2010	N=1,136	18.3	28.1	12.5	18.5	19.8	26.8	40.7	<0.001
2011	N=1,192	16.4	18.9	12.1	18.2	22.7	17.6	23.1	0.010
2012	N=1,186	18.0	(38.1)	15.3	16.6	19.5	27.7	20.7	0.013
2013	N=1,300	14.8	(25.9)	11.7	10.8	20.9	18.5	26.2	<0.001
2014	N=1,325	16.3	(15.8)	12.5	12.7	23.7	22.6	28.8	<0.001
2015	N=1,287	14.8	(22.7)	12.0	13.3	16.1	21.1	25.0	0.009
2016	N=1,342	12.8	(14.8)	9.6	10.7	18.6	16.4	21.4	0.001
2017	N=1,466	12.7	(29.4)	9.2	11.2	14.6	18.9	21.9	<0.001
<b>Type of birth</b>									
Unassisted vaginal	N=5,706	14.2	26.8	11.2	12.0	19.5	19.4	23.7	<0.001
Assisted vaginal	N=1,464	14.1	21.9	11.0	14.4	14.5	25.0	26.0	0.001
Elective CS	N=1,492	20.7	(14.3)	17.9	17.3	23.6	27.8	25.6	0.014
Emergency CS	N=1,572	15.8	(19.2)	10.7	15.7	18.7	16.2	28.7	<0.001
<b>All births</b>	N=10,234	15.4	23.8	11.8	13.7	19.4	21.1	25.5	<0.001

The proportions in brackets are based on 30 births or less  
Abbreviations: BMI, body mass index; CS, caesarean section

**Supplementary Table 2: Not breastfeeding during hospital stay by socioeconomic status and year of birth: % per birth**

		RII 1 <sup>st</sup> quintile (lowest SES)	RII 2 <sup>nd</sup> quintile	RII 3 <sup>rd</sup> quintile	RII 4 <sup>th</sup> quintile	RII 5 <sup>th</sup> quintile (highest SES)	P value
<b>Year of birth</b>							
2010	N=1,136	22.5	17.2	17.1	18.3	12.7	0.038
2011	N=1,192	19.8	19.2	18.2	11.7	11.1	0.016
2012	N=1,186	22.0	14.5	17.4	17.3	13.3	0.062
2013	N=1,300	17.9	23.7	11.1	16.5	10.1	0.002
2014	N=1,325	18.8	22.4	16.3	14.1	12.4	0.103
2015	N=1,287	17.5	13.2	13.8	15.3	10.8	0.190
2016	N=1,342	15.4	11.5	11.6	12.8	10.9	0.382
2017	N=1,466	16.8	11.8	12.2	9.0	9.4	0.011
<b>All births</b>	N=10,234	18.8	16.3	14.6	14.0	11.3	<0.001

Abbreviation: RII, relative index of inequality

**Supplementary Table 3:** Not breastfeeding during hospital stay: logistic regression using the Generalised Estimating Equations (GEE) approach

Covariates	Univariate (unadjusted)		Multivariable (adjusted)	
	OR (95% CI)	P value	OR (95% CI)	P value
<b>Age categories (years)</b>				
20 – 34 (reference)	1.00		1.00	
≤19	1.90 (1.53-2.36)	<0.001	2.27 (1.78-2.89)	<0.001
35 – 39	0.94 (0.81-1.09)	0.443	0.82 (0.69-0.97)	0.021
≥40	0.83 (0.62-1.13)	0.243	0.69 (0.50-0.95)	0.024
<b>Body mass index</b>	<b>Kg/m<sup>2</sup></b>			
Normal weight	18.5 – 24.9 (reference)	1.00	1.00	
Underweight	<18.5	1.73 (1.22-2.44)	1.39 (0.97-1.99)	0.075
Over-weight	25.0 – 29.9	1.29 (1.12-1.48)	1.32 (1.14-1.53)	<0.001
Obese class I	30.0 – 34.9	1.71 (1.47-2.00)	1.66 (1.40-1.96)	<0.001
Obese class II	35.0 – 39.9	1.95 (1.60-2.38)	1.85 (1.50-2.29)	<0.001
Obese class III	≥40.0	2.60 (2.10-3.22)	2.61 (2.07-3.29)	<0.001
<b>Relative index of socioeconomic inequality</b>				
5 <sup>th</sup> quintile (highest SES) (reference)	1.00		1.00	
4 <sup>th</sup> quintile	1.22 (0.97-1.53)	0.089	1.03 (0.81-1.30)	0.815
3 <sup>rd</sup> quintile	1.23 (1.01-1.49)	0.037	1.08 (0.88-1.32)	0.457
2 <sup>nd</sup> quintile	1.40 (1.05-1.86)	0.023	0.99 (0.74-1.34)	0.958
1 <sup>st</sup> quintile (lowest SES)	1.76 (1.47-2.10)	<0.001	1.41 (1.17-1.69)	<0.001
<b>Born in Oceania</b>	2.14 (1.62-2.81)	<0.001	1.46 (1.10-1.94)	0.010
<b>Aboriginal Australian or Torres Strait Islander</b>	2.01 (1.64-2.47)	<0.001	1.35 (1.09-1.68)	0.006
<b>Past or current smoker</b>	2.64 (2.33-3.00)	<0.001	2.00 (1.74-2.30)	<0.001
<b>Alcohol consumption (any quantity)</b>	1.42 (1.04-1.94)	0.027	1.24 (0.89-1.72)	0.212
<b>Pre-existing diabetes mellitus type 1 or 2</b>	1.95 (1.19-3.21)	0.009	1.56 (0.92-2.64)	0.100
<b>Pre-existing hypertension</b>	1.77 (1.24-2.54)	0.002	1.41 (0.96-2.06)	0.078
<b>Other than hypertension and diabetes pre-existing comorbidity</b>	1.14 (1.03-1.27)	0.015	1.00 (0.89-1.13)	0.933

<b>Gravidity</b>				
1 (reference)	1.00		1.00	
2	1.08 (0.95-1.23)	0.233	0.93 (0.75-1.15)	0.524
3	1.51 (1.31-1.74)	< 0.001	1.24 (0.96-1.59)	0.097
4 or more	1.83 (1.59-2.11)	< 0.001	1.38 (1.06-1.80)	0.015
<b>Primiparous</b>	0.72 (0.65-0.79)	<0.001	0.74 (0.60-0.90)	0.004
<b>Induction of labour</b>	0.89 (0.79-0.99)	0.035	0.97 (0.85-1.10)	0.610
<b>Type of birth</b>				
Unassisted vaginal (reference)	1.00		1.00	
Assisted vaginal	1.01 (0.87-1.17)	0.890	1.40 (1.18-1.67)	<0.001
Elective caesarean section	1.55 (1.34-1.79)	<0.001	1.82 (1.51-2.21)	<0.001
Emergency caesarean section	1.22 (1.05-1.42)	0.008	1.59 (1.31-1.93)	<0.001
<b>Primary blood loss, ml</b>				
Up to 500 (reference)	1.00		1.00	
501 – 749	1.05 (0.89-1.22)	0.563	1.07 (0.90-1.27)	0.456
750 – 999	1.05 (0.86-1.29)	0.644	1.08 (0.86-1.35)	0.498
1000 or more	1.36 (1.05-1.75)	0.018	1.44 (1.09-1.91)	0.011
<b>Mother's hospital length of stay (days), continuous</b>	0.95 (0.91-0.99)	0.035	0.82 (0.77-0.87)	<0.001
<b>Infant's birth weight in grams</b>				
2500-3999 (reference)	1.00		1.00	
<2500	2.28 (1.90-2.73)	<0.001	1.76 (1.42-2.17)	<0.001
4000 +	1.02 (0.89-1.18)	0.751	0.96 (0.82-1.12)	0.583
<b>Admission of infant to a special care unit</b>	1.62 (1.44-1.82)	<0.001	1.43 (1.24-1.64)	<0.001
<b>Year of birth</b>				
2010 (reference)	1.00		1.00	
2011	0.90 (0.74-1.09)	0.307	0.89 (0.72-1.09)	0.248
2012	0.93 (0.77-1.12)	0.467	0.90 (0.74-1.09)	0.291
2013	0.86 (0.72-1.04)	0.122	0.79 (0.64-0.96)	0.018
2014	0.91 (0.76-1.09)	0.324	0.82 (0.67-0.99)	0.047
2015	0.88 (0.73-1.06)	0.188	0.74 (0.60-0.91)	0.004

2016	0.78 (0.64-0.94)	0.010	0.63 (0.51-0.78)	<0.001
2017	0.73 (0.61-0.89)	0.002	0.61 (0.50-0.75)	<0.001