



Supporting Information

Supplementary results

**This appendix was part of the submitted manuscript and has been peer reviewed.
It is posted as supplied by the authors.**

Appendix to: Baker YE, Teale G, Vasilevski V, et al. Obesity in women giving birth in Victoria, 2010–2019: a retrospective cohort study. *Med J Aust* 2024; doi: 10.5694/mja2.52387.

Table 1. Selected socio-demographic and perinatal characteristics of women with obesity (body mass index $\geq 30\text{kg/m}^2$) who gave birth in Victoria, 2010–2019

	All years	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
n	141,867	12,340	12,409	13,211	13,499	13,710	14,369	14,980	15,249	15,775	16,327
Age											
<30	56881 (40.1%)	5136 (41.7%)	5218 (42.1%)	5447 (41.3%)	5581 (41.4%)	5662 (41.3%)	5823 (40.5%)	5889 (39.3%)	5935 (38.9%)	6073 (38.5%)	6117 (37.5%)
≥ 30	84951 (59.9%)	7194 (58.3%)	7177 (57.9%)	7753 (58.7%)	7912 (58.6%)	8046 (58.7%)	8546 (59.5%)	9091 (60.7%)	9313 (61.1%)	9702 (61.5%)	10210 (62.5%)
Missing data	37	10	14	4	6	2	0	0	1	0	0
Parity											
0	51,744 (36.5%)	4449 (36.1%)	4487 (36.2%)	4791 (36.3%)	4900 (36.3%)	4965 (36.2%)	5175 (36.0%)	5441 (36.3%)	5517 (36.2%)	5790 (36.7%)	6229 (38.2%)
≥ 1	90,123 (63.5%)	7891 (63.9%)	7921 (63.8%)	8420 (63.7%)	8599 (63.7%)	8745 (63.8%)	9194 (64.0%)	9539 (63.7%)	9732 (63.8%)	9985 (63.3%)	10097 (61.8%)
Country of birth											
Australia	106,359 (75%)	9976 (80.8%)	9915 (79.9%)	10298 (78%)	10371 (76.8%)	10302 (75.1%)	10656 (74.2%)	10917 (72.9%)	11097 (72.8%)	11223 (71.1%)	11604 (71.1%)
Other	35510 (25.0%)	2364 (19.2%)	2494 (20.1%)	2913 (22.0%)	3128 (23.2%)	3408 (24.9%)	3713 (25.8%)	4063 (27.1%)	4152 (27.2%)	4552 (28.9%)	4723 (28.9%)
Smoked during pregnancy											
Smoked during pregnancy	16130 (11.5%)	1729 (14.2%)	1660 (13.6%)	1733 (13.3%)	1620 (12.2%)	1657 (12.3%)	1615 (11.4%)	1604 (10.9%)	1503 (10.0%)	1495 (9.6%)	1514 (9.3%)
Missing data	1806	172	189	164	190	199	213	197	187	172	123
Pre-existing diabetes											
Pre-existing diabetes	2226 (1.6%)	108 (0.9%)	139 (1.1%)	182 (1.4%)	166 (1.2%)	217 (1.6%)	253 (1.8%)	268 (1.8%)	261 (1.7%)	316 (2.0%)	316 (1.9%)

Table 2. Categorisation by body mass index of women who gave birth in Victoria, 2010–2019, by birth year *

Year	Body mass index group									
	Underweight		Normal weight		Overweight		Obesity		Extreme obesity	
	Number	Proportion (95% CI)	Number	Proportion (95% CI)	Number	Proportion (95% CI)	Number	Proportion (95% CI)	Number	Proportion (95% CI)
2010	2923	4.3% (4.2–4.4%)	30 822	49.0% (48.6–49.4%)	16 761	26.7% (26.3–27.0%)	12 340	19.6% (19.3–19.9%)	169	0.27% (0.22–0.31%)
2011	2957	4.3% (4.2–4.4%)	30 642	48.9% (48.5–49.3%)	16 680	26.6% (26.3–27.0%)	12 409	19.8% (19.5–20.1%)	185	0.30% (0.25–0.34%)
2012	3175	4.3% (4.2–4.4%)	32 647	48.8% (48.4–49.2%)	17 837	26.7% (26.3–27.0%)	13 211	19.8% (19.4–20.1%)	171	0.25% (0.21–0.30%)
2013	2929	4.0% (4.0–4.1%)	32 580	48.4% (48.1–48.8%)	18 240	27.1% (26.8–27.5%)	13 499	20.1% (19.8–20.4%)	208	0.31% (0.27–0.35%)
2014	3592	4.7% (4.6–4.8%)	34 938	49.3% (48.9–49.7%)	18 626	26.3% (26.0–26.6%)	13 710	19.3% (19.0–19.6%)	217	0.31% (0.26–0.35%)
2015	3596	4.5% (4.4–4.6%)	37 673	49.9% (49.6–50.3%)	19 818	26.3% (26.0–26.6%)	14 369	19.0% (18.8–19.3%)	255	0.34% (0.30–0.38%)
2016	3836	4.7% (4.6–4.8%)	37 874	49.1% (48.8–49.5%)	20 422	26.5% (26.2–26.8%)	14 980	19.4% (19.1–19.7%)	231	0.30% (0.26–0.34%)
2017	3563	4.4% (4.4–4.5%)	37 131	48.8% (48.4–49.1%)	20 207	26.5% (26.2–26.8%)	15 249	20.0% (19.7–20.3%)	240	0.31% (0.28–0.35%)
2018	3254	4.2% (4.0–4.2%)	35 664	47.3% (47.0–47.7%)	20 658	27.4% (27.1–27.7%)	15 775	20.9% (20.6–21.2%)	256	0.34% (0.30–0.38%)
2019	3166	4.0% (3.9–4.1%)	35 446	46.8% (46.4–47.1%)	20 838	27.5% (27.2–27.8%)	16 327	21.5% (21.2–21.8%)	279	0.37% (0.33–0.41%)

CI = confidence interval; * Separate Poisson models for each body mass index group.

Table 3. Categorisation by body mass index of women who gave birth in Victoria, 2010–2019, by location and birth year*

Year of birth	Body mass index group: women in metropolitan areas							
	Underweight		Normal weight		Overweight		Obesity	
	Number	Proportion, % (95% CI)	Number	Proportion, % (95% CI)	Number	Proportion, % (95% CI)	Number	Proportion, % (95% CI)
2010	2294	4.9 (4.7, 5.1)	23722	51.0 (50.6, 51.5)	12231	26.3 (25.9, 26.7)	8244	17.7 (17.7, 17.8)
2011	2333	5.1 (4.9, 5.3)	23511	51.1 (50.7, 51.6)	11928	25.9 (25.5, 26.3)	8226	17.9 (17.8, 17.9)
2012	2522	5.1 (4.9, 5.3)	25364	51.0 (50.5, 51.4)	12981	26.1 (25.7, 26.5)	8886	17.9 (17.8, 17.9)
2013	2323	4.6 (4.5, 4.8)	25278	50.5 (50.1, 51.0)	13317	26.6 (26.2, 27.0)	9120	18.2 (18.2, 18.3)
2014	2963	5.5 (5.3, 5.7)	27662	51.4 (50.9, 51.8)	13870	25.8 (25.4, 26.1)	9356	17.4 (17.3, 17.4)
2015	2988	5.1 (4.9, 5.3)	30252	52.0 (51.6, 52.4)	15001	25.8 (25.4, 26.1)	9925	17.1 (17.0, 17.1)
2016	3278	5.5 (5.3, 5.7)	30694	51.2 (50.8, 51.6)	15552	25.9 (25.6, 26.3)	10394	17.3 (17.3, 17.4)
2017	3025	5.1 (4.9, 5.3)	30222	51.1 (50.7, 51.5)	15334	25.9 (25.6, 26.3)	10524	17.8 (17.8, 17.8)
2018	2776	4.8 (4.6, 4.9)	29064	49.8 (49.4, 50.2)	15689	26.9 (26.5, 27.2)	10814	18.5 (18.5, 18.6)
2019	2701	4.6 (4.4, 4.8)	28832	49.0 (48.6, 49.4)	15926	27.1 (26.7, 27.4)	11398	19.4 (19.3, 19.4)

Year of birth	Body mass index group: women in regional areas							
	Underweight		Normal weight		Overweight		Obesity	
	Number	Proportion, % (95% CI)	Number	Proportion, % (95% CI)	Number	Proportion, % (95% CI)	Number	Proportion, % (95% CI)
2010	629	3.8 (3.8, 3.9)	7100	43.4 (43.3, 43.5)	4530	27.7 (27.6, 27.8)	4096	25.0 (25.0, 25.1)
2011	624	3.7 (3.7, 3.8)	7131	42.7 (42.6, 42.8)	4752	28.5 (28.4, 28.6)	4183	25.1 (25.0, 25.1)
2012	653	3.8 (3.8, 3.8)	7283	42.5 (42.4, 42.6)	4856	28.4 (28.3, 28.4)	4325	25.3 (25.2, 25.3)
2013	606	3.5 (3.5, 3.5)	7302	42.4 (42.3, 42.5)	4923	28.6 (28.5, 28.7)	4379	25.4 (25.4, 25.7)
2014	629	3.7 (3.7, 3.7)	7276	42.8 (42.7, 42.9)	4756	27.9 (27.9, 28.0)	4354	25.6 (25.5, 25.7)
2015	608	3.5 (3.5, 3.5)	7421	42.9 (42.8, 43.0)	4817	27.9 (27.8, 27.9)	4444	25.7 (25.6, 25.8)
2016	558	3.2 (3.2, 3.3)	7180	41.8 (41.7, 41.9)	4870	28.3 (28.2, 28.4)	4586	26.7 (26.6, 26.7)
2017	538	3.1 (3.1, 3.2)	6909	40.5 (40.4, 40.6)	4873	28.6 (28.5, 28.7)	4725	27.7 (27.6, 27.8)
2018	478	2.8 (2.8, 2.8)	6600	38.8 (38.7, 38.9)	4969	29.2 (29.1, 29.3)	4961	29.2 (29.1, 29.2)
2019	465	2.7 (2.7, 2.8)	6614	39.1 (39.0, 39.2)	4912	29.0 (28.9, 29.1)	4929	29.1 (29.0, 29.2)

CI = confidence interval; * Separate Poisson models for each body mass index group.

Table 4. Postcode-level socio-economic status, by Department of Health area, Victoria, 2010–2019

Department of Health area	IRSD quintile*				
	1	2	3	4	5
Overall cohort	99975 (14.1%)	78751 (11.1%)	198419 (15.3%)	241768 (34.0%)	181451 (25.5%)
Births to mothers with obesity	24955 (17.6%)	20975 (14.8%)	24740 (17.4%)	51198 (36.1%)	20001 (14.1%)
Metropolitan	53988 (10.0%)	41873 (7.7%)	79453 (14.7%)	193630 (35.8%)	171576 (31.7%)
Bayside Peninsula	2640 (2.8%)	4896 (5.2%)	18304 (19.4%)	8709 (9.2%)	60040 (63.5%)
Brimbank Melton	14845 (32.5%)	9971 (21.8%)	10215 (22.4%)	10610 (23.2%)	0
Hume Moreland	8441 (18.1%)	12976 (27.9%)	7538 (16.2%)	12849 (27.6%)	4788 (10.3%)
Inner Eastern Melbourne	0	0	0	14779 (24.3%)	46030 (75.7%)
North Eastern Melbourne	5973 (7.7%)	2440 (3.2%)	10156 (13.2%)	31491 (40.8%)	27073 (35.1%)
Outer Eastern Melbourne	620 (1.2%)	1067 (2.1%)	13701 (27.0%)	28384 (56.0%)	6955 (13.7%)
Southern Melbourne	20266 (23.2%)	4911 (5.6%)	12383 (14.2%)	41707 (47.8%)	7919 (9.1%)
Western Melbourne	1203 (1.5%)	5612 (7.2%)	7156 (9.2%)	45101 (57.9%)	18771 (24.1%)
Regional	45987 (27.1%)	36878 (21.7%)	28966 (17.1%)	48138 (28.3%)	9875 (5.8%)
Barwon	7366 (21.8%)	1019 (3.0%)	7320 (21.7%)	11687 (34.6%)	6416 (19.0%)
Central Highlands	3103 (14.1%)	546 (2.5%)	4708 (21.4%)	13412 (61.0%)	218 (1.0%)
Goulburn	9601 (52.4%)	3101 (16.9%)	3840 (21.0%)	1745 (9.5%)	32 (0.2%)
Inner Gippsland	6478 (30.9%)	6888 (32.9%)	3616 (17.2%)	3986 (19.0%)	0
Loddon	6413 (25.2%)	6957 (27.3%)	2804 (11.0%)	6098 (23.9%)	3209 (12.6%)
Mallee	7266 (63.1%)	3045 (26.5%)	839 (7.3%)	361 (3.1%)	0
Outer Gippsland	1900 (21.0%)	6408 (70.8%)	741 (8.2%)	5 (0.1%)	0
Ovens Murray	1247 (9.3%)	3449 (25.7%)	1386 (10.3%)	7334 (54.7%)	0
Western District	2613 (17.1%)	5465 (35.7%)	3712 (24.3%)	3510 (22.9%)	0

* Index of Relative Socio-Economic Disadvantage; quintile 1 = most disadvantaged; quintile 5= least disadvantaged.

STROBE statement: Checklist of items that should be included in reports of cohort studies

	Item No	Recommendation	Page*
Title and abstract	1	(a) Indicate the study's design with a commonly used term in the title or the abstract	1
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	1
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	2
Objectives	3	State specific objectives, including any prespecified hypotheses	2
Methods			
Study design	4	Present key elements of study design early in the paper	2
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	2
Participants	6	(a) Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up	2-3
		(b) For matched studies, give matching criteria and number of exposed and unexposed	N/A
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	3
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	2
Bias	9	Describe any efforts to address potential sources of bias	3
Study size	10	Explain how the study size was arrived at	N/A
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	3
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding	3
		(b) Describe any methods used to examine subgroups and interactions	3
		(c) Explain how missing data were addressed	3
		(d) If applicable, explain how loss to follow-up was addressed	N/A
		(e) Describe any sensitivity analyses	N/A
Results			

Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	3
		(b) Give reasons for non-participation at each stage	N/A
		(c) Consider use of a flow diagram	N/A
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	Table 1
		(b) Indicate number of participants with missing data for each variable of interest	Table 1, Appendix 2
		(c) Summarise follow-up time (eg, average and total amount)	N/A
Outcome data	15*	Report numbers of outcome events or summary measures over time	4
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	Table 3, Table 4
		(b) Report category boundaries when continuous variables were categorized	N/A
		(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	N/A
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	N/A
Discussion			
Key results	18	Summarise key results with reference to study objectives	5
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	6
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	5, 6
Generalisability	21	Discuss the generalisability (external validity) of the study results	6
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	N/A

N/A, not applicable

* Page and table numbers do not apply to the published version of the article or its Supporting Information.