Trends in obesity and impact on obstetric outcomes in a regional hospital in Victoria

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INTRODUCTION

Australia has one of the highest rates of overweight and obesity in the developed world[1]. Obesity in pregnancy presents a major public health issue for mothers and their babies. Awareness of its impact is of particular importance in non-urban populations where disparities in health outcomes already exist[2].

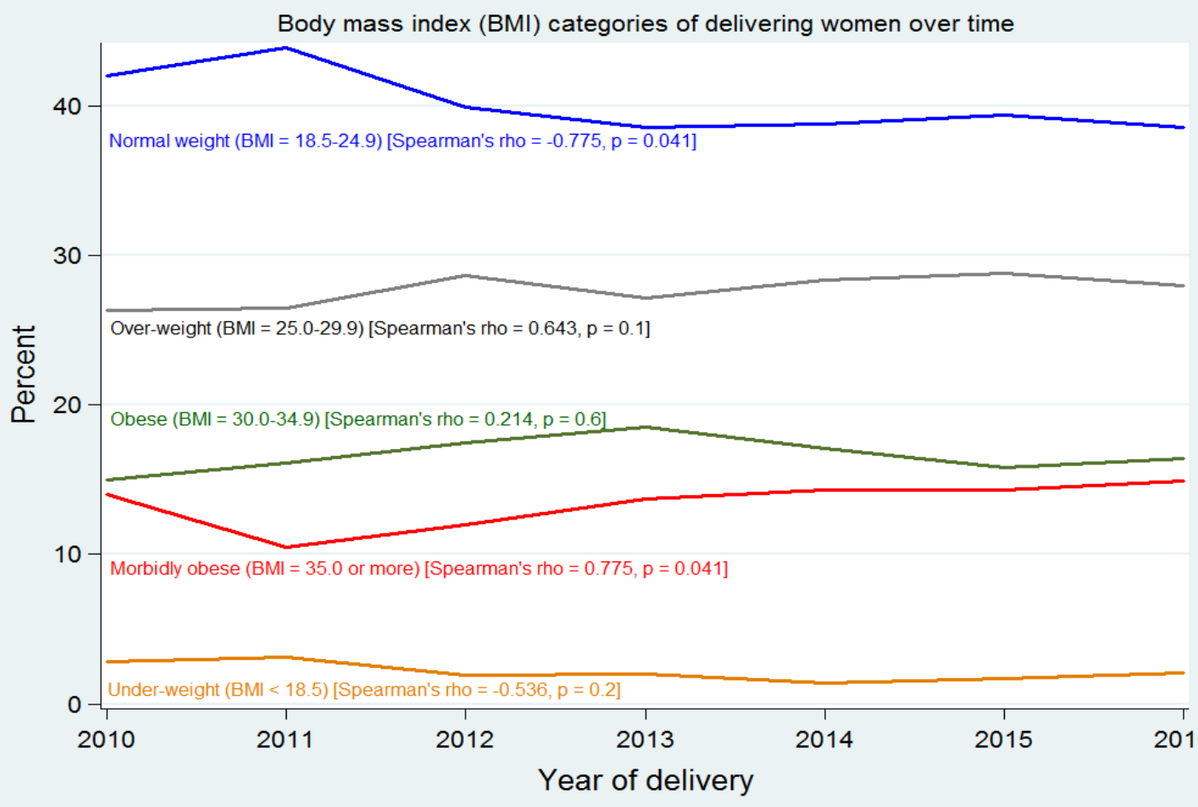
	Normal	Over-weight	Obese Class I	Obese Class II	Obese Class III	p-value†
	N =3543	N =2449	N =1473	N = 682	N = 504	
	40.1%	27.7%	16.7%	7.7%	5.7%	
Lowest Socioeconomic status, %	32.6	34.8	35.7	38.8	40.6	< 0.001
Pre-existing hypertesion, %	0.9	1.3	2.8	6.0	8.4	< 0.001
Gestational diabetes, %	5.3	8.7	14.3	22	23.2	< 0.001
Gestational hypertension, %	2.3	3.6	4.9	6	9.1	< 0.001
Pre-eclampsia, %	0.9	1.2	2.3	3.4	3	< 0.001
Meconium liquor, %	7.2	8	9	11.4	11.3	< 0.001
Type of delivery, %						
Unassisted	60.8	56	53.6	50.7	46.6	
Assisted vaginal birth	16.1	14.7	12.6	11	7.5	< 0.001
Planned elective C/S	10.4	14.3	16.4	19.1	25.6	
Emergency C/S	12.6	15	17.4	19.2	20.2	
Shoulder dystocia, %	2.4	3.4	3.4	4.1	3.6	0.024
Macrosomia, %	1.4	2.7	3.8	4.2	7.4	< 0.001
Admission special care,%	17.6	17.4	20.9	20.8	21.9	< 0.001
Exclusively breastfed , %	68.1	66	54.3	52.7	49.2	< 0.001

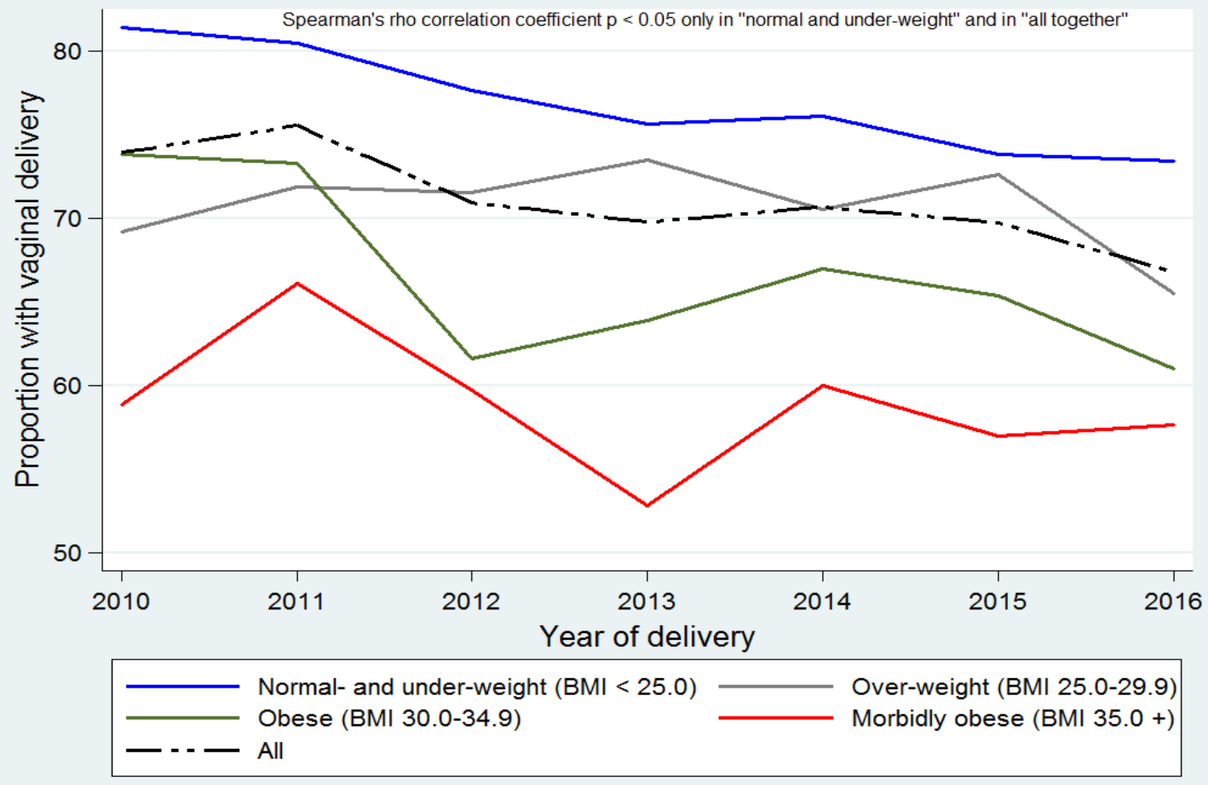
METHODS

We performed a seven-year trend analysis of body mass index (BMI) in a regional population of pregnant women in Victoria, Australia. Maternal and neonatal information were retrospectively collected and the prevalence of comorbidities and obstetric complications were compared.

RESULTS

Of the 6 661 women who birthed between January 2010 to December 2016, 56.8% were overweight (BMI 25-30) or obese (BMI ≥30). Over time there was a significant trend in the number of women with a BMI>35, and a decreased in those with normal weight. Those who were overweight or obese were more likely to present with preexisting comorbidities and develop pregnancy-related complications. Caesarean section rates increased incrementally with increasing BMI category, and vaginal birth rates decreased.





CONCLUSION

Given the far reaching impact of maternal obesity and unique opportunity for preventative health interventions in pregnancy our research highlights the importance of ensuring regional health providers are well resourced to deliver care tailored to the population they are serving to ensure sustainable and effective maternity services.

REFERENCES

1. Australian Institute of Health and Welfare (AIHW). National Maternity Data Development Project: Body Mass Index
2. Australian Institute of Health and Welfare (AIHW). Rural, regional and remote health: indicators of health status and determinants of health