

Supplementary Tables

Supplementary Table S1: Overview of variables, source of information, reporting methods and definitions.

Supplementary Table S2: Sensitivity analysis of eclampsia in different BMI-strata 2014-2020

Supplementary Table S3: BMI missing vs BMI observed across different variables (eclampsia, parity, health region group, maternal age group, gestational age), 2014 – 2020, Norway

Supplementary Table S4: Regional differences in onset of labor, mode of delivery and gestational age in cases of eclampsia and severe preeclampsia, 2000 – 2020, Norway.

Supplementary Table S1: Overview of variables, source of information, reporting methods and definitions.

Variable	Source	Type of reporting	Definition
Pre-pregnancy factors			
Maternal age	MBRN	Identified based on national ID-number	
Mother's country of birth	MBRN	Based on information from the Norwegian Population Register.	Coded according to the global burden of diseases (GBD) classification of high, medium and low-income countries
Travel time to obstetric unit	Statistic Norway	Estimates based on geographic coordinates for individual home address and obstetric institution, national electronic road database was used to estimate travel time.	Defined in minutes and categorized according to travel time from the home address to the nearest obstetric institution (<60 minutes vs. ≥60 minutes).
Body Mass Index	MBRN	FTF; height FTF; weight	
Chronic renal disease	MBRN	xBx	Reported since 1999; since 2016, the MBRN has provided examples of chronic renal diseases, including glomerulonephritis, nephrotic syndrome, chronic pyelonephritis, recurrent nephrolithiasis, toxic injury–related renal disease, reduced renal function, kidney failure, and kidney transplantation.
Rheumatoid arthritis	MBRN	xBx	
Epilepsy	MBRN	xBx	Also, it is reported whether the woman has used antiepileptic drugs over the past 5 years.
Chronic hypertension	MBRN	xBx	Preexisting hypertension (BP ≥140 systolic and/or ≥ 90 diastolic) at start of pregnancy or diagnosed before gestational week 20 in the current pregnancy
Pregestational diabetes	MBRN	xBx	Diabetes mellitus type 1 or 2 before the start of pregnancy.
Use of antidiabetic medication	MBRN	FTF	Reported if use of antidiabetic drugs during pregnancy.
Pregnancy factors			
Parity	MBRN	xBx	
Multiple gestation	MBRN	xBx	

Preeclampsia	MBRN	xBx	From 1999 : BP: 140-159mmHg systolic or diastolic 90-109mmHg (or increased BP $\geq$ 15 mmHg) and proteinuria $\geq$ + on urine dip stick. From 2014 : BP $\geq$ 140 mmHg systolic and/or 90 mmHg diastolic after gestational week 20 with at least 2 measurements, and proteinuria $\geq$ 0.3 gram/24 hours ($\geq$ 1+ on urine dipstick).
Severe preeclampsia	MBRN	xBx	From 1999: BP: $\geq$ 160/110 (or increased BP $\geq$ 30 mmHg) and proteinuria $\geq$ ++ From 2014 : One or more findings as: BT $\geq$ 160/110mmHg, proteinuria $\geq$ 3gram/24 hours, oliguri(<500 ml/24hours) or increased serum creatinine, thrombocytopenia < 100x10 ⁹ or signs of microangiopathic hemolytic anemia, elevated liver enzymes (LD; AST; ALT,) or symptoms as (epigastric pain, nausea and vomit, headache and visual disturbances, pulmonary oedema/cyanosis) We also included preeclampsia reported before gestational week 34.
Eclampsia	MBRN	xBx, verification of cases	Generalized seizures occurring antepartum, intrapartum or within 7 days postpartum, combined with preeclampsia.
HELLP	MBRN	xBx, verification of cases performed by MBRN.	H-hemolysis, EL-elevated liver enzymes, LP-low platelet count.
Placental abruptio	MBRN	xBx	
Gestational diabetes	MBRN		From 1999 : Oral glucose tolerance test $\geq$ 7.8 at 2 hours From 2014 : Fasting blood glucose < 7.0 mmol/L and 2 hours after oral glucose tolerance

			test (OGT): ≥ 7.8 mmol/L, but under < 11.1 mmol/L From 2017 : fasting blood glucose 5.3-6.9 mmol/l and/ or 2-hour value at OGT: 9.0-11.0 mmol/L.
Delivery-related factors			
Onset of labor	MBRN	xBx	Spontaneous, induction of labor or cesarean section.
Mode of delivery	MBRN	xBx	Spontaneous vaginal delivery, instrumental vaginal delivery (by forceps or vacuum), and cesarean section
Perinatal death	MBRN	xBx and freetext – date of death. The MBRN receives information from the National Population Registry on deaths among live-born children occurring within the first year of life.	This included stillbirths, including intrauterine death before the onset of labor. If the child was born and died later this is reported using the date of death. Perinatal deaths were included in the study if death occurred within 28 days after birth.

xBX: Tick boxes - predefined categories in the MBRN notification form.

FTF: Free text fields: Free text fields are coded according to the ICD-10 by the MBRN.

Supplementary Table S2

Sensitivity analysis of eclampsia in different BMI-strata 2014-2020

	Study population	Eclampsia	Incidence per 10 000	95% CI
Bmi missing	65 504	26	3.97	2.6-5.8
BMI < 30	288 946	72	2.49	2.0-3.1
BMI ≥ 30	41 594	23	5.53	3.5-8.3

Fisher's exact test (two-sided); p-value: 0.001, when comparing BMI ≥ 30 and BMI < 30.

Supplementary Table S3

BMI missing vs BMI observed across different variables (eclampsia, parity, health region group, maternal age group, gestational age), 2014 – 2020, Norway.

	BMI observed N (%)	BMI missing N (%)	p-value
Overall (2014-2020)	330 540 (83)	65 504 (17)	<0.001
2014	42 275 (72)	16 790 (28)	
2015	43 686 (74)	15 241 (26)	
2016	48 489 (82)	10 632 (18)	
2017	49 323 (90)	7 997 (14)	
2018	49 323 (91)	5 749 (10)	
2019	49 561 (91)	4 846 (9)	
2020	48 649 (92)	4 249 (8)	
Eclampsia			0.143
Yes	95 (79)	26 (21)	
No	330 445 (83)	65 478 (17)	
Parity			<0.001
Para 0	143 506 (85.2)	24 944 (15)	
Para ≥ 1	187 034 (82.2)	40 560 (18)	
Health regions group			<0.001
South-East/North	215 628 (85)	37 624 (15)	
West /Central	114 876 (81)	26 895 (19)	
Missing health region	36 (4)	985 (96)	
Maternal age groups			<0.001
<20	3062 (80)	764 (20)	
20-24	34 723 (83)	7187 (17)	
25-29	107 187 (84)	20 119 (16)	
30-34	117 712 (84)	23 124 (16)	
35-39	55 674 (83)	11 652 (17)	
>40	(12 178 (82)	2657 (18)	
Mean age (95%CI)	30.4 (30.39-30.42)	30.5 (30.46-30.53)	
Mean gestational age (95%CI)	278.1(278.1-278.2)	277.6 (277.4 – 277.8)	<0.001
Median gestation age	280 (IQR 13)	280 (IQR 13)	
Travel time			<0.001
0-59 min	302 088 (84)	57 291 (16)	
≥ 60 min	26 273 (79)	7 104 (21)	

Abbreviations: CI: confidence interval.

All statistical tests were two-sided. P-values were estimated using the chi-square test for categorical variables when comparing BMI observed versus BMI missing, and by Wilcoxon rank-sum for median gestational age.

Supplementary Table S4: Regional differences in onset of labor, mode of delivery and gestational age in cases of eclampsia and severe preeclampsia, 2000 – 2020, Norway.

[illegible]

Cesarean section	5 512 (64)	2 980 (54)	2 330 (64)	1 251 (55)	1 556 (65)	896 (51)	1 626 (65)	833 (56)
Vaginal	3 049 (35)	2 544 (46)	1 337 (36)	1 037 (45)	841 (35)	851 (49)	871 (35)	656 (44)

Abbreviation: SD: Standard deviation. IQR: interquartile range

1: 2722 (0.2%) women had missing information about health region; none of them had eclampsia.

2: 7 (1.2%) women with eclampsia had missing information on gestational age,

3: 115 (1.3%) women with severe preeclampsia had missing information on gestational age.

Regional differences in gestational age were assessed using a two-sided Wilcoxon rank-sum test.

Among women with eclampsia, no statistical difference was detected in median gestational age between the South-East/North and the West/Central regions, overall and for the periods 2000-2007 and 2008-2013. However, a statistically significant difference was observed for the period 2014–2020 ($p = 0.032$) (Wilcoxon rank-sum).

Among women with severe preeclampsia, median gestational age differed significantly between the South-East/North and West/Central regions overall and for all time periods with $p < 0.05$ (Wilcoxon rank-sum).