Background Hypertensive disorders of pregnancy account for nearly 18% of all maternal deaths worldwide. They are associated with increased risk of maternal and neonatal morbidity, adverse pregnancy outcomes and long-term health risks for both mother and baby. This study aims to determine prevalence, risk factors and outcomes associated with hypertensive disorders of pregnancy (Pregnancy-induced hypertension, pre eclampsia, eclampsia, HELLP, hypertensive disorder of pregnancy unspecified).

Methods Data on maternity hospital discharges (ICD codes O00-O09) for women giving birth in Ireland in 2016 were extracted from Hospital In-Patient Enquiry (HIPE) using Health Atlas. Women discharged following delivery were identified using ICD-10 codes O80-O84 for delivery. Those with a diagnosis of a hypertensive disorder of pregnancy were identified using ICD-10 codes O10-O16. Frequencies and descriptive statistics were used to present prevalence rates of hypertensive disorders of pregnancy. Pearson’s Chi-square and multivariate analyses were conducted to identify risk factors. Data was analysed in SPSS version 25 and JMP version 9.

Results Of 60,188 births, 3531 women (5.9%) had a hypertensive disorder of pregnancy. Rates were higher among women with pre-existing diabetes, gestational diabetes, obesity and those age ≥40years (p<0.001). Women with a diagnosis of a hypertensive disorder of pregnancy had a higher risk of poor foetal growth (OR 2.6), preterm labour and birth (OR 3.7), placental abruption (OR 2.0), long labour (OR 1.4), instrument-assisted delivery (OR 1.2), caesarean section (OR 1.8), postpartum haemorrhage (OR 1.6) and length of stay ≥6 days (OR 5.6).

After adjusting for all factors, obesity (OR 4.3) pre-existing diabetes (OR 3.5), gestational diabetes (OR 1.5) and being aged ≥ 40 years (1.5) remained significantly associated with being diagnosed with a hypertensive disorder.

Conclusion As the number of overweight and obese pregnant women, women giving birth aged ≥ 40 years, and those with pre-existing diabetes mellitus or new onset gestational diabetes increase rates of hypertensive disorders of pregnancy will likely become more common obstetric risks. They therefore represent a significant public health concern. These findings can help inform strategies for identifying factors associated with hypertensive disorders of pregnancy.