

Chiari & Pregnancy: Large Study on Maternal Complications

While several research studies have shown that for most Chiari women, pregnancy can be safely handled – especially by a multidisciplinary care team – in general those studies have been based on relatively small numbers of patients. Recently, however, a study from Howard University used a research database to look at over 2000 deliveries involving Chiari moms from 2009 to 2025.

While the focus of the study was looking at complication rates based on delivery method (vaginal vs cesarean) and race, with a little more digging we can compare the published complication rates to overall complication rates in the US. Unlike many Chiari pregnancy publications which are focused on worsening of Chiari symptoms, this study looked at common maternal complications such as gestational hypertension, preeclampsia, eclampsia, and post delivery headache. They also looked at the rates of abnormal fetal heartrates.

In general, there were minimal differences in these complications based on delivery method and race, although perineal lacerations were significantly more common among Black Chiari patients than white Chiari patients. The rates of gestational hypertension, meaning blood pressure above 140/90 during pregnancy were between 3.5-4.0% for the Chiari women (varying by delivery method and race). This is slightly lower than published rates for the general population, which are between 6-9%. Preeclampsia, which is when the high blood pressure also includes protein in the urine or other indication of organ damage ranged from 4-7% for the Chiari women. This is in line with published national averages which range from 5-8%. Eclampsia, which is when the high blood pressure progresses to the point that it involves seizures or even a coma, occurred in the Chiari patients 1-3% of the time which is much higher than the national average of less than 1%. However, it is important to keep in mind that this study went back more than 10 years, and eclampsia rates have dropped significantly during that time.

An abnormal fetal heartrate occurred in 2.3% of the Chiari deliveries, which is slightly higher than national rates of 1-2% but it's impossible to say if this is due to Chiari or not. Only 5-6% of the Chiari women reported post-delivery headaches which is lower than published national estimates.

In the past twelve months there has been a virtual avalanche of valuable data published on Chiari and it is encouraging to see a pregnancy study involve such a large number of patients.

Source: Amaefuna C, Elkomi R, Bhatia R, et al. Beyond Assumptions: Racial and Delivery Method Outcomes in Pregnant Patients With Chiari Malformation. Cureus. 2025;17(11):e98027. Published 2025 Nov 28. doi:10.7759/cureus.98027

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