



Progress in Reducing the Low-Risk Cesarean Birth Rate in New Jersey:

An Examination of Data from 2016–2023

Summary



While Cesarean births can be medically necessary, the procedure has significant health risks. Thus, as part of the Nurture NJ initiative, New Jersey implemented several policies aimed at reducing the number of Cesareans performed without a clear medical need.



While the rate of low-risk Cesarean births was relatively high in 2016 compared to other states, New Jersey had the largest reduction in low-risk Cesarean birth rates of any state between 2016 and 2023, decreasing by 10 percent from 30.2 percent to 27.3 percent.



Low risk Cesarean rates remained highest for individuals with private insurance, declining 28.9 percent in 2018 to 27.1 percent in 2023, though the trend over time was not statistically significant. Among those with Medicaid, where many Nurture NJ policies are focused, rates fell significantly from 24.8 percent in 2018 to 21.3 percent in 2023.



Despite overall improvements, racial disparities in low-risk Cesarean birth rates persist in New Jersey. Black and Asian women experience rates 20-22% higher than those of white women.

Importance of Reducing the Cesarean Birth Rate and New Jersey's Policy Efforts

Nearly one in three births in the United States involve Cesarean delivery, with significantly higher rates among Black women (March of Dimes, 2024). While Cesarean birth can be medically necessary, the procedure carries significant health risks, including blood clots and infections as well as emotional and economic costs for women (Sandall et al., 2018). A national goal of Healthy People 2030 is to reduce the percentage of low-risk Cesarean births to less than 23.6% of all births (U.S. Department of Health and Human Services, n.d.). The measure for this target is the Nulliparous, Term, Singleton, Vertex (NTSV) Cesarean Birth Rate, which identifies the proportion of live babies born at or beyond 37.0 weeks' gestation to women in their first pregnancy, that are singleton (no multiples) and in the cephalic presentation (no breech presentation or transverse lie), via Cesarean birth (California Maternal Quality Care Collaborative, n.d.).



As part of the Nurture NJ initiative, the state has implemented several policies to lower NTSV Cesarean rates across hospitals as part of its efforts to improve maternal and child health.

For example, in 2019 New Jersey enacted P.L. 2019, c. 87, which prohibits health benefits coverage under Medicaid, the State Health Benefits Program, and the School Employees' Health Benefits Program for certain nonmedically indicated, early elective deliveries (EEDs) performed at a hospital before 39 weeks' gestation (New Jersey State Legislature, 2019; Office of the First Lady of New Jersey, 2021).

In addition, in 2019, doula care became a benefit available to Medicaid beneficiaries through state legislative action P.L. 2019, c. 85. Doula-attended births are associated with lower Cesarean rates (Kozhimannil et al., 2014). The policy was fully implemented in 2021 (Office of the First Lady of New Jersey, 2021; The Office of the Governor of New Jersey, 2023). Another recent policy change (2023) in New Jersey has equalized Medicaid reimbursement rates for maternity services for physicians and midwives, expanding opportunities for midwifery care (The Office of the Governor of New Jersey, 2023). Use of midwives is associated with lower rates of Cesarean birth (Damiano et al., 2020; Erickson et al., 2021; Krolikowski-Ulmer et al., 2018; Lundsberg et al., 2017; The Commonwealth Fund, 2023).

The Nurture NJ Strategic Plan also includes a series of recommendations regarding comprehensive informed consent procedures for maternity patients and limitations on participation in provider networks for hospitals that are not meeting national targets for NTSV Cesarean births (Hogan et al., 2021; New Jersey Department of Health, 2024).

New Jersey Comparison to Other States

This original analysis investigates changes in the low-risk Cesarean birth rate in New Jersey before and after policy changes went into effect using CDC Wonder Birth data for state comparisons and data provided by the New Jersey Department of Health Maternal Data Center for the NJ specific rates.¹ Figure 1 shows the change in NTSV Cesarean birth rates by state from 2016 to 2023.



While New Jersey started the period with a relatively high rate, it had the largest reduction of any state over this period, decreasing by 10 percent from 30.2 percent to 27.3 percent.

¹ NJ-specific data was obtained from the New Jersey Maternal Data Center, which combines birth records with hospital discharge records to identify individuals with NTSV births and Cesarean deliveries. Cross-state comparisons use birth records only from the CDC Wonder Database.

Among the 31 states with rates that were higher than the Healthy People target of 23.6% in 2016, only 11 (including New Jersey) achieved any decline in their NTSV Cesarean birth rate, while the other 20 states saw increases over this period. However, despite this progress, New Jersey's NTSV Cesarean birth rate remained higher than many other states in 2023. Continued support and implementation of the Nurture NJ policies have the potential to further improve New Jersey's rate overall and relative to other states.

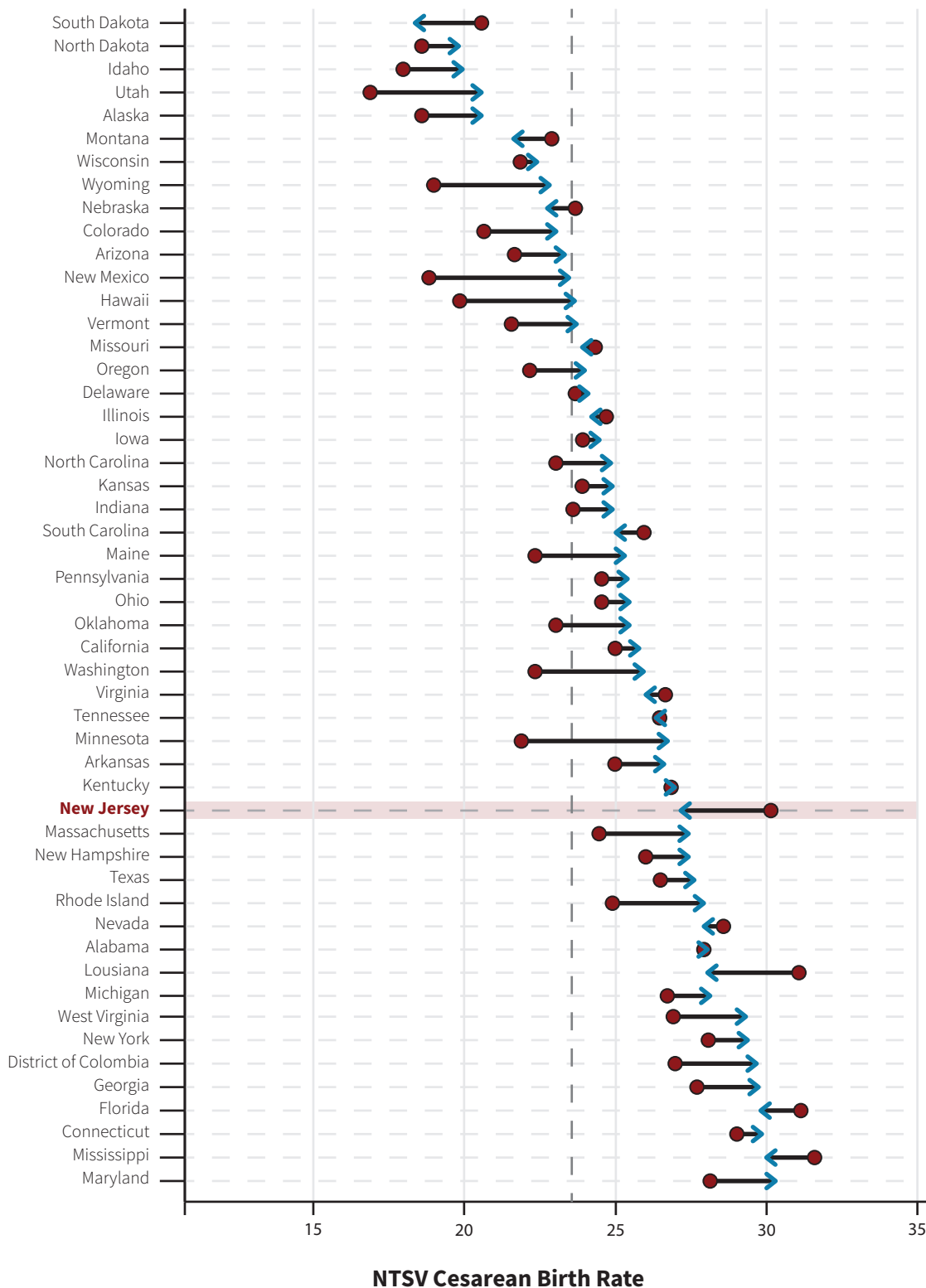


Figure 1. Change in NTSV Cesarean Birth Rate from 2016 (Red) to 2023 (Blue) Across States

Notes: Rates are unadjusted for population characteristics. Dashed line indicates Healthy People 2030 target. Source: CDC Wonder Births.

Examining progress in NJ: Differences by insurance status and race

Figure 2 shows the NTSV Cesarean birth rate in New Jersey by insurance status at delivery annually from 2018 to 2023. Cesarean rates were highest for individuals with private insurance, consistent with the broader scientific literature on Cesarean births among privately insured patients (Hoxha et al., 2017), declining from 28.9 percent in 2018 to 27.1 percent in 2023, though the trend over time was not statistically significant. Among those with Medicaid, where many Nurture NJ policies are focused, rates fell significantly from 24.8 percent in 2018 to 21.3 percent in 2023 (linear trend, $p=0.03$). Since 2019, births paid for by Medicaid have met the Healthy People target for the NTSV Cesarean birth rate.

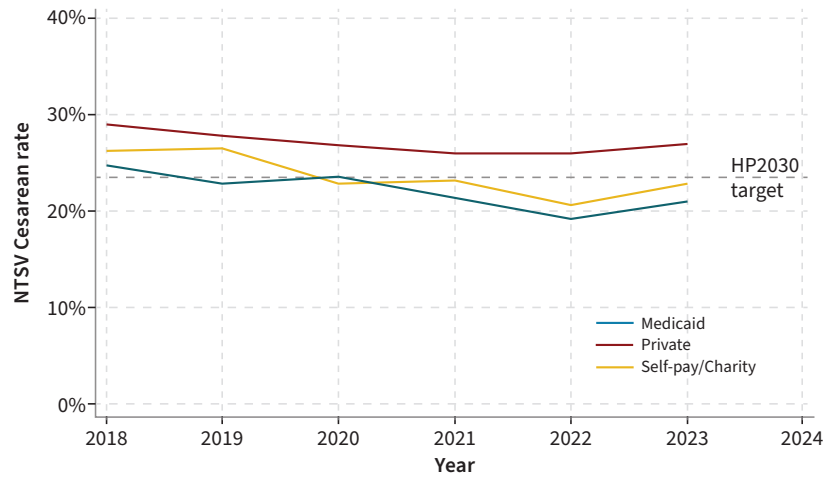


Figure 2. NTSV Cesarean Birth Rates by Insurance at Delivery, New Jersey, 2018–2023
Notes: HP2030=Healthy People 2030; Source: NJ DOH Maternal Data Center

Despite overall improvements, racial disparities in low-risk Cesarean birth rates persist in New Jersey. Figure 3 shows the ratio of NTSV Cesarean birth rates by race and ethnicity, as compared to non-Hispanic White women. A ratio of 1.25, for example, indicates a 25% higher rate than for White women. From 2018 to 2023, Black and Asian women experienced rates on average about 22% and 20% higher, respectively, than those of White women, with no indication of a decline in disparities over this period. Women of multi-race and other populations did see a narrowing of the gap from 19% higher than White women in 2018 to 6% higher by 2023 (linear trend, $p=0.001$). Women of Hispanic ethnicity had similar NTSV Cesarean birth rates as White non-Hispanic across the study period, with a slight, non-significant decline.

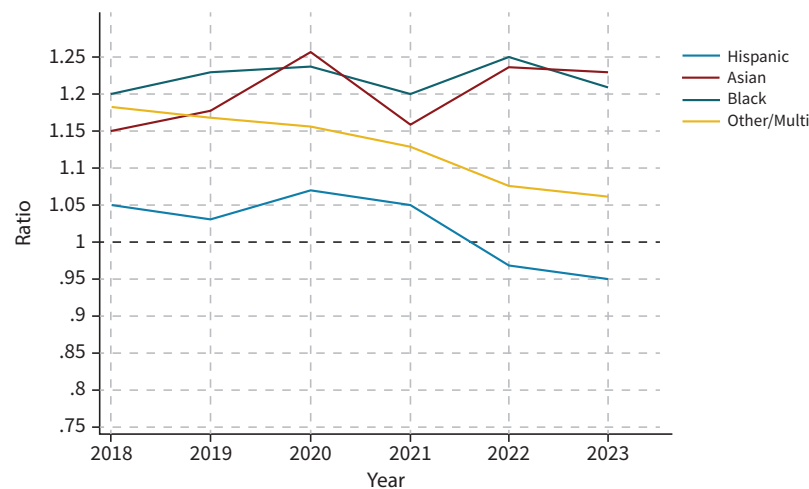


Figure 3. Ratios of NTSV Cesarean Birth Rates by Race and Ethnicity, as compared to non-Hispanic White women, New Jersey, 2018–2023
Note: Ratio of 1 indicates equal rates. Source: NJ DOH Maternal Data Center.

Recommendations for Policy and Practice

New Jersey has made progress in reducing low-risk Cesarean births. The implementation of payment changes which disallowed payments for certain early elective deliveries has had an effect on Cesarean rates, particularly among people covered by Medicaid. Full implementation of policies that provide broader access to doulas and midwives, whose services are associated with lower Cesarean rates, is likely to contribute to additional improvements.

In addition, New Jersey hospitals should continue to adopt and utilize the American College of Obstetricians and Gynecologists (ACOG) Alliance for Innovation on Maternal Health (AIM) Safe Reduction of Cesarean Birth patient safety bundle (American College of Obstetrics and Gynecology, 2021).

Other strategies to reduce the Cesarean rate could include increasing access to group prenatal care, utilizing intermittent fetal monitoring for low-risk patients, avoiding the admission of patients in early labor without a medical indication, and increasing the midwifery and doula presence in all New Jersey birthing hospitals (Alfirevic et al., 2017; Damiano et al., 2020; Kozhimannil et al., 2014; Smith et al., 2016; Trudnak et al., 2013; Wood et al., 2015).

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References: 1. Alfirevic, Z., Gyte, G. M., Cuthbert, A., & Devane, D. (2017). Continuous cardiotocography (CTG) as a form of electronic fetal monitoring (EFM) for fetal assessment during labour. *Cochrane Database of Systematic Reviews*, 2019(5). <https://doi.org/10.1002/14651858.CD006066.pub3> 2. American College of Obstetrics and Gynecology. (2021). *Safe Reduction of Cesarean Birth* | AIM. <https://saferbirth.org/psbs/safe-reduction-of-cesarean-birth/> 3. California Maternal Quality Care Collaborative. (n.d.). NTSV Cesarean Birth Overview | California Maternal Quality Care Collaborative. *NTSV Cesarean Birth Overview*. Retrieved December 13, 2024, from <https://www.cmqcc.org/focus-areas/quality-improvement/ntsv-c-sections> 4. Corredor-Waldron, A., Currie, J., & Schnell, M. (2024). *Drivers of Racial Differences in C-Sections* (Working Paper 32891). National Bureau of Economic Research. <https://doi.org/10.3386/w32891> 5. Damiano, E. A., Auty, S. G., Von Mertens, J., & Gerjevic, K. A. (2020). Singleton, Term, Vertex Cesarean Delivery on a Midwife Service Compared With an Obstetrician Service. *Obstetrics & Gynecology*, 135(6), 1353–1361. <https://doi.org/10.1097/AOG.0000000000003748> 6. Erickson, E. N., Bailey, J. M., Colo, S. D., Carlson, N. S., & Tilden, E. L. (2021). Induction of labor or expectant management? Birth outcomes for nulliparous individuals choosing midwifery care. *Birth*, 48(4), 501–513. <https://doi.org/10.1111/birt.12560> 7. Hogan, V. K., Lee, E., Asare, L. A., Banks, B., Bentiez Delgado, L. E., Bingham, D., Brooks, P. E., Culhane, J., Lallo, M., Nieves, E., Rowley, D. L., Karimi-Taleghani, P. H., Whitaker, S., Williams, T. D., & Madden-Wilson, J. (2021). *Nurture NJ Strategic Plan*. <https://nurturenj.nj.gov/> 8. Hoxha, I., Syrogiannoulis, L., Braha, M., Goodman, D. C., Da Costa, B. R., & Jüni, P. (2017). Cesarean sections and private insurance: Systematic review and meta-analysis. *BMJ Open*, 7(8), e016600. <https://doi.org/10.1136/bmjopen-2017-016600> 9. Kozhimannil, K. B., Attanasio, L. B., Jou, J., Joarnt, L. K., Johnson, P. J., & Gjerdingen, D. K. (2014). Potential benefits of increased access to doula support during childbirth. *The American Journal of Managed Care*, 20(8), e340–e352. 10. Krolikowski-Ulmer, K., Watson, T. J., Westhoff, E. M., Ashmore, S. L., Thompson, P. A., & Landeen, L. B. (2018). The Collaborative Laborist and Midwifery Model: An Accepted and Sustainable Model. *South Dakota Medicine: The Journal of the South Dakota State Medical Association*, 71(12), 534–537. 11. Lundsberg, L. S., Illuzzi, J. L., Garipey, A. M., Sheth, S. S., Pettker, C. M., Lee, H. C., Lipkind, H. S., & Xu, X. (2017). Variation in Hospital Intrapartum Practices and Association With Cesarean Rate. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, 46(1), 5–17. <https://doi.org/10.1016/j.jogn.2016.07.011> 12. March of Dimes. (2024, January). Total Cesarean deliveries by maternal race: United States, 2021–2023 Average. *March of Dimes* | PeriStats. <https://www.marchofdimes.org/peristats/data?lev=1&obj=1®=99&slev=1&stop=355&top=8> 13. New Jersey Department of Health. (2024, April 9). NJSHAD - Summary Health Indicator Report—Cesarean Deliveries among Low Risk Women. *New Jersey State Health Assessment Data*. <https://www-doh.nj.gov/doh-shad/indicator/summary/MODLowRisk.html> 14. New Jersey State Legislature. (2019, May). *P.L. 2019, c.087 (S3378 2R CC)*. https://pub.njleg.gov/bills/2018/PL19/87_.HTM 15. Office of the First Lady of New Jersey. (2021, February 2). *First Lady Tammy Murphy and New Jersey Department of Human Services Announce New Medicaid Initiatives to Help Improve Maternal & Infant Health*. Insider NJ. <https://www.insidernj.com/press-release/first-lady-tammy-murphy-new-jersey-department-human-services-announce-new-medicaid-initiatives-help-improve-maternal-infant-health/> 16. Sandall, J., Tribe, R. M., Avery, L., Mola, G., Visser, G. H., Homer, C. S., Gibbons, D., Kelly, N. M., Kennedy, H. P., Kidanto, H., Taylor, P., & Temmerman, M. (2018). Short-term and long-term effects of caesarean section on the health of women and children. *The Lancet*, 392(10155), 1349–1357. [https://doi.org/10.1016/S0140-6736\(18\)31930-5](https://doi.org/10.1016/S0140-6736(18)31930-5) 17. Smith, H., Peterson, N., Lagrew, D., & Main, E. (2016). Toolkit to Support Vaginal Birth and Reduce Primary Cesareans: A Quality Improvement Toolkit. *California Maternal Quality Care Collaborative*. https://www.cmqcc.org/system/files/resources/VBirth%20Toolkit%20Final_V09.20.17.pdf 18. The Commonwealth Fund. (2023, May 5). *How Expanding the Role of Midwives in U.S. Health Care Could Help Address the Maternal Health Crisis*. <https://doi.org/10.26099/3qm1-3914> 19. The Office of the Governor of New Jersey. (2023, January 1). *First Lady Murphy & Human Services Commissioner Adelman Announce Enhanced NJ FamilyCare Maternal Health Care Reimbursement* [Government]. Official Site of the State of New Jersey. <https://www.nj.gov/humanservices/news/pressreleases/2023/approved/20230131.shtmls://nj.gov/governor/> 20. Trudnak, T. E., Arboleda, E., Kirby, R. S., & Perrin, K. (2013). Outcomes of Latina Women in CenteringPregnancy Group Prenatal Care Compared With Individual Prenatal Care. *Journal of Midwifery & Women's Health*, 58(4), 396–403. <https://doi.org/10.1111/jmwh.12000> 21. U.S. Department of Health and Human Services. (n.d.). *Reduce cesarean births among low-risk women with no prior births—MICH-06—Healthy People 2030* | *odphp.health.gov*. Retrieved February 14, 2025, from <https://odphp.health.gov/healthypeople/objectives-and-data/browse-objectives/pregnancy-and-childbirth/reduce-cesarean-births-among-low-risk-women-no-prior-births-mich-06> 22. Wood, A., Frey, H., Tuuli, M., Caughey, A., Odibo, A., Macones, G., & Cahill, A. (2015). Optimal Admission Cervical Dilation in Spontaneously Laboring Women. *American Journal of Perinatology*, 33(02), 188–194. <https://doi.org/10.1055/s-0035-1563711>