

UC San Diego

Symposium 2026

Title

Improving NTSV Cesarean Delivery Rates in Medi-Cal Patients at UC San Diego Health

Permalink

<https://escholarship.org/uc/item/15h9j8tf>

Authors

Do, Nguyen

Hoang, Mai

Ruppin-Pham, Ayelet

Publication Date

2026-05-25

Supplemental Material

<https://escholarship.org/uc/item/15h9j8tf#supplemental>

Data Availability

The data associated with this publication are available upon request.

Project Title: Improving NTSV Cesarean Delivery Rates in Medi-Cal Patients at UC San Diego Health

Background:

UC San Diego Health is a designated public hospital system and participates in the Quality Incentive Pool (QIP) Program [1], a pay-for-performance program implemented by the California Department of Health Care Services. UC San Diego Health conducts over 5,000 deliveries annually across Hillcrest Medical Center (HC), the county's safety-net hospital with high Medi-Cal use, and Jacobs Medical Center (JMC), serving a mixed payer population. Elevated primary cesarean rates among nulliparous, term, singleton, vertex (NTSV) pregnancies are linked to increased maternal morbidity, including severe acute maternal morbidity (SAMM), postpartum infections, thromboembolic events, and rehospitalization, as well as higher healthcare utilization [2-3]. Racial and ethnic disparities persist, with non-Hispanic Black and Hispanic individuals experiencing higher adjusted risks [4-6]. The overall cesarean rate at UC San Diego Health was 21.7% in 2024 and 21.8% in 2025, higher at HC (27.3%, 27.0%) and lower at JMC (21.0%, 21.1%) versus UC systemwide averages. In 2024, the Medi-Cal QIP population cesarean rate was 24.29%, above the state target of 22.95%, resulting in \$1.4 million in unrealized revenue. This project aims to reduce NTSV cesarean rates while improving maternal and neonatal outcomes.

Methods:

A retrospective chart review was performed on all NTSV cesareans within the QIP program from January–June 2025 (n=56) at HC and JMC, including only Medi-Cal patients. Data collected included patient demographics (age, race/ethnicity, language, zip code, BMI), prenatal care (number of visits), labor characteristics (spontaneous labor vs induction, indication for induction, and indication for cesarean delivery), intrapartum factors (doula involvement, oxytocin use and dosage, spontaneous vs artificial rupture of membranes, and labor duration), and system-level variables (hospital site, day of the week, and time of cesarean delivery). Analysis focused on modifiable drivers of cesarean delivery and care variation. Ongoing analysis of the July–December 2025 cohort at HC expands sample size and assesses consistency of findings.

Results:

Among the cohort, 71% of NTSV cesareans followed labor induction, most often for hypertensive disorders of pregnancy (35%). Non-reassuring fetal heart tracings (NRFHT) accounted for 36%. Doula utilization was low (14%), varying between HC (6.3%) and JMC (17.5%). Most cesareans occurred at JMC (71.4%) versus HC (28.6%). At HC, 25.0% of cesareans were in patients with fewer than five prenatal visits, compared to 2.5% at JMC. Cesareans averaged 6.0 per weekend day and 9.8 per weekday, with 62.5% during daytime hours.

Conclusions:

NTSV cesareans among Medi-Cal patients are influenced by induction practices, NRFHT management, low doula utilization, and variation in prenatal care access. Targeted interventions include reducing elective inductions, expanding doula access, optimizing NRFHT management, and patient/provider education. Iterative quality improvement efforts, particularly at HC, aim to reduce cesarean rates without compromising maternal or neonatal outcomes. This project supports improved outcomes, addresses disparities, and provides a model for broader obstetric quality initiatives.

Word Count: 469

References:

1. California Department of Health Care Services. Directed Payments Quality Incentive Pool Program. Accessed March 31, 2026. <https://www.dhcs.ca.gov/services/Pages/DP-DPH-QIP.aspx> Updated January 16, 2026.

2. Sandall J, Tribe RM, Avery L, et al. Short-term and long-term effects of caesarean section on the health of women and children. *Lancet*. 2018;392(10155):1349-1357. doi:10.1016/S0140-6736(18)31930-5.

3. Lydon-Rochelle M, Holt VL, Martin DP, Easterling TR. Association Between Method of Delivery and Maternal Rehospitalization. *JAMA*. 2000;283(18):2411-2416. doi:10.1001/jama.283.18.2411.

4. Bartal MF, Chen HY, Mendez-Figueroa H, Wagner SM, Chauhan SSP. Racial and Ethnic Disparities in Primary Cesarean Birth and Adverse Outcomes Among Low-Risk Nulliparous People. *Obstet Gynecol*. 2022;140(5):842-852. doi:10.1097/AOG.0000000000004953. PMID: 36201767.

5. Debbink MP, Ugwu LG, Grobman WA, et al. Racial and Ethnic Inequities in Cesarean Birth and Maternal Morbidity in a Low-Risk, Nulliparous Cohort. *Obstet Gynecol*. 2022;139(1):73-82. doi:10.1097/AOG.0000000000004620. PMID: 34856577.

6. Bane S, Mujahid MS, Main EK, Carmichael SL. Socioeconomic disadvantage and racial/ethnic disparities in low-risk cesarean birth in California. *Am J Epidemiol*. 2025;194(1):132-141. doi:10.1093/aje/kwae157. PMID: 38932570.

Figure 1: % CS rate by indications

% CS rate by indications				
%NRFHT	%failed induction	%arrest of dilation	%arrest of descent	%elective/pt request
35.7	14.3	23.2	16.1	10.7

Figure 2: % of Inductions by Indications

% of Induction by Indications							
Hypertensive Disorders (incl preeclampsia)	Other indications	Elective	PROM	Post-Date	Diabetes	IUGR	
35.0	17.5	15.0	15.0	10.0	10.0	5.0	