Sustaining Low NTSV Rates: Strategies and Successes at MedStar Montgomery Medical Center

MARYLAND PERINATAL NEONATAL QUALITY COLLABORATIVE MONTHLY MEETING

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Objectives

- Discuss the importance of reducing NTSV rates.
- Share our hospital's success strategies and initiatives.
- Highlight key interventions: provider communication, NTSV checklist, and Spinning Babies.
- Provide actionable recommendations for implementation.

Why Does NTSV Matter?

Impacts of High NTSV Rates:

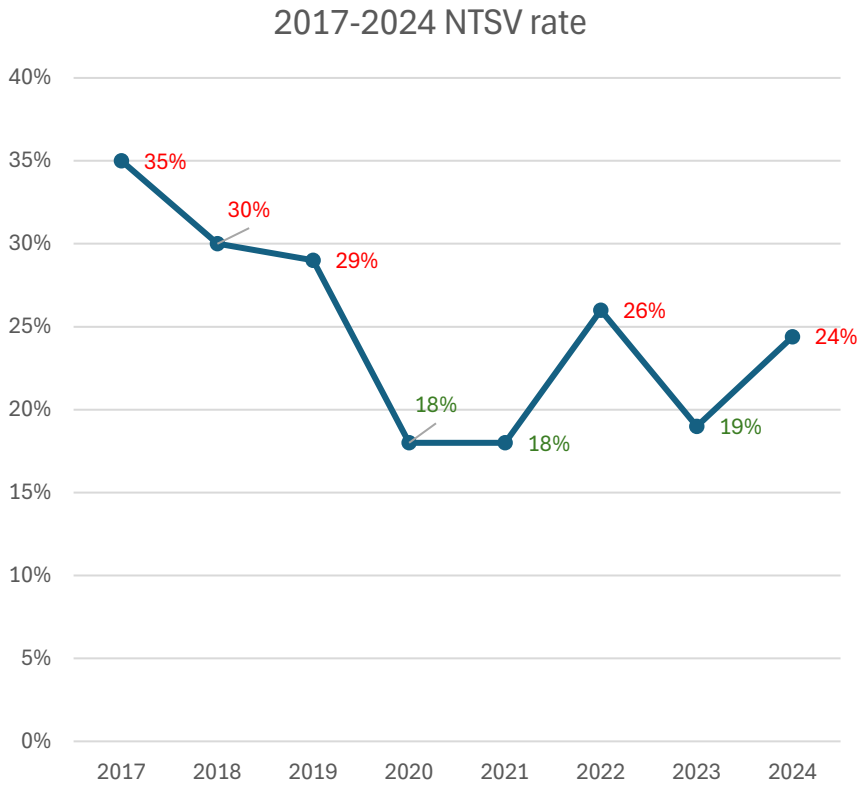
- Increased maternal risks: infection, blood loss, recovery time.
- Long-term complications: placenta previa, uterine rupture in future pregnancies.
- Higher healthcare costs.

Benefits of Low NTSV Rates:

- Improved maternal and neonatal outcomes.
- Faster recovery and patient satisfaction.
- Lower costs for hospitals and families.

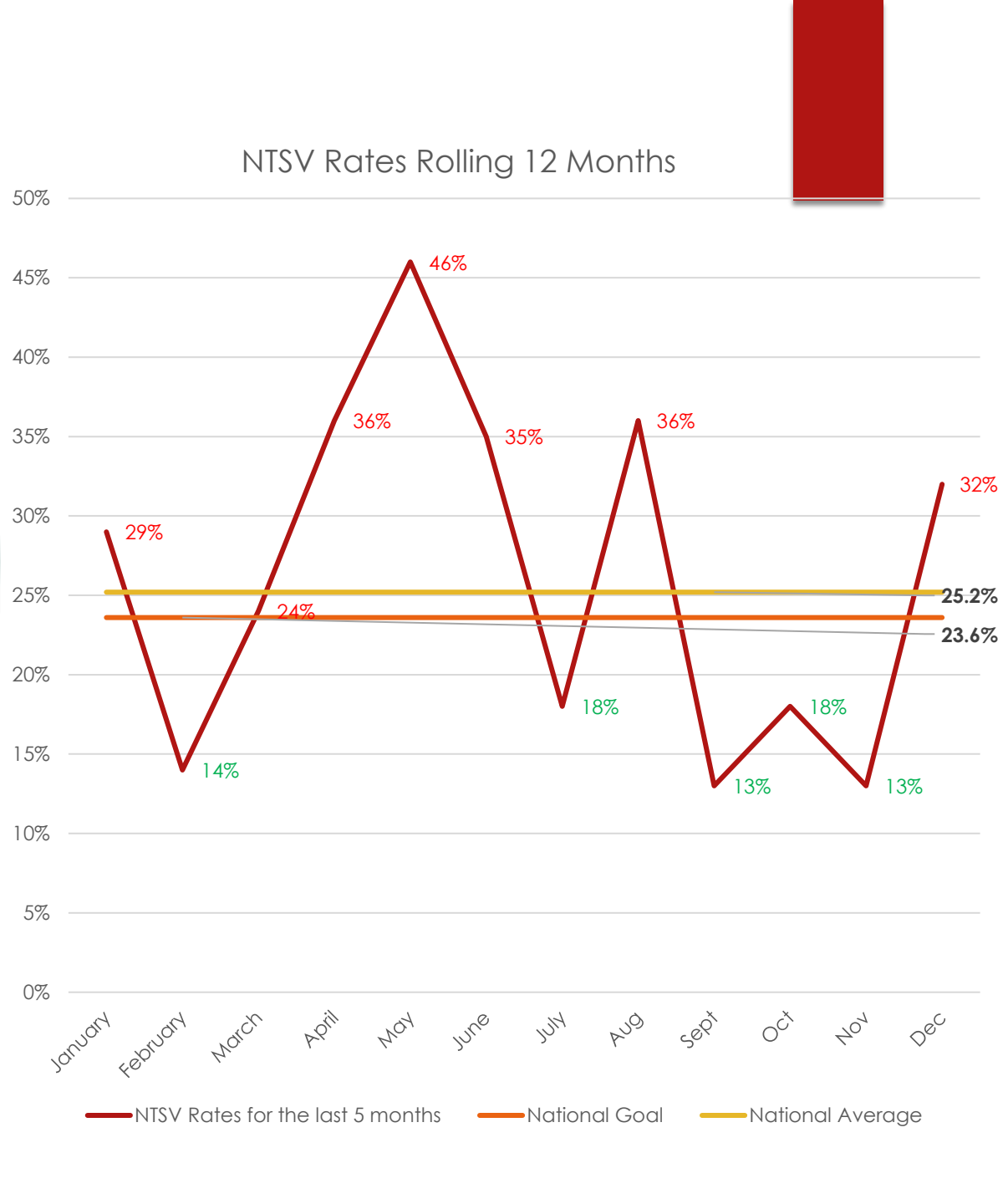
The Why

- From 2017-2019 our NTSV rate was well over the national benchmark at 35%, 30%, and 29% respectively.
- In 2019, we sent several nurses to Spinning Babies, with the expectation that they would teach their colleagues, creating a ripple effect of knowledge and skill.



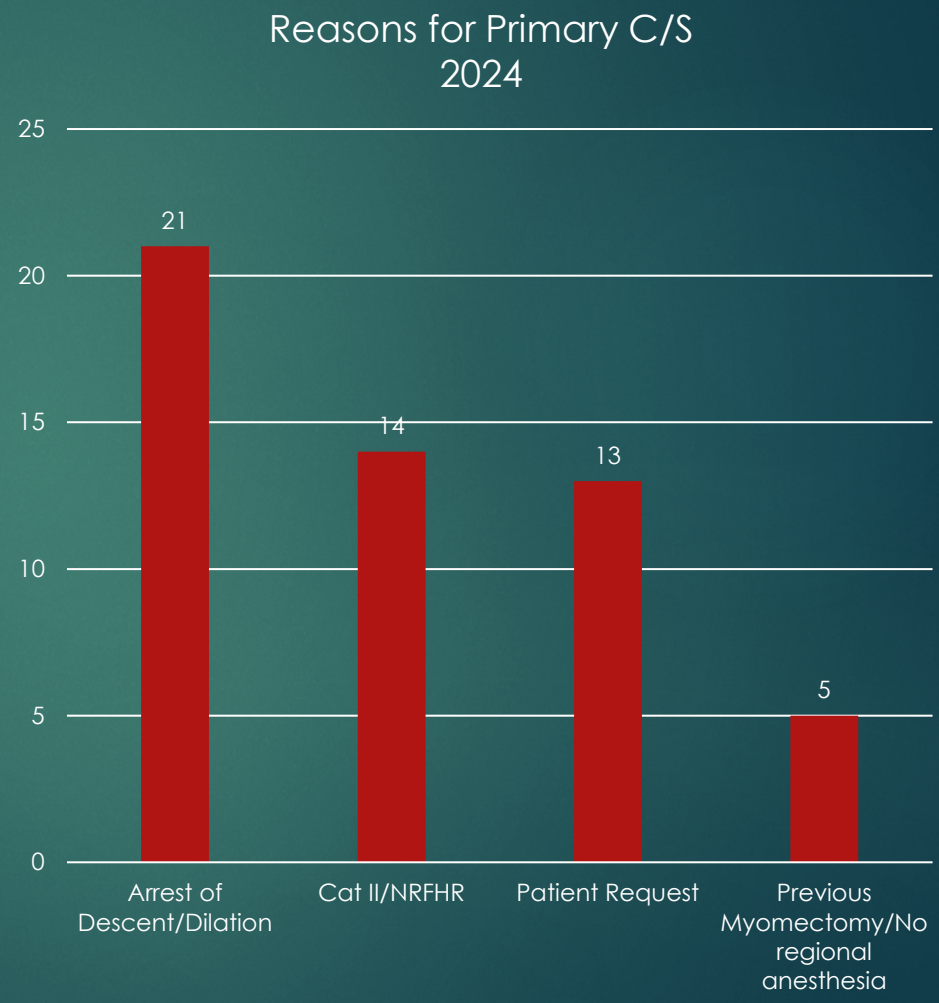
NTSV Rate

- Definition: Nulliparous, Term, Singleton, Vertex (NTSV) cesarean rate.
- Importance: Tracks avoidable cesarean deliveries in first-time pregnancies.
- We have had a rate as low as 0%.



Our Hospital's Success

- **December NTSV Rate:** 32%
- **National Benchmark Comparison:** 23.6%
- **2024 Avg NTSV Rate:** 26.2% (graph)
- There were 3 previous myomectomies, 1 pt with platelets 39k and dropping, 1 pt with a hx of spinal fusion T10-L4.

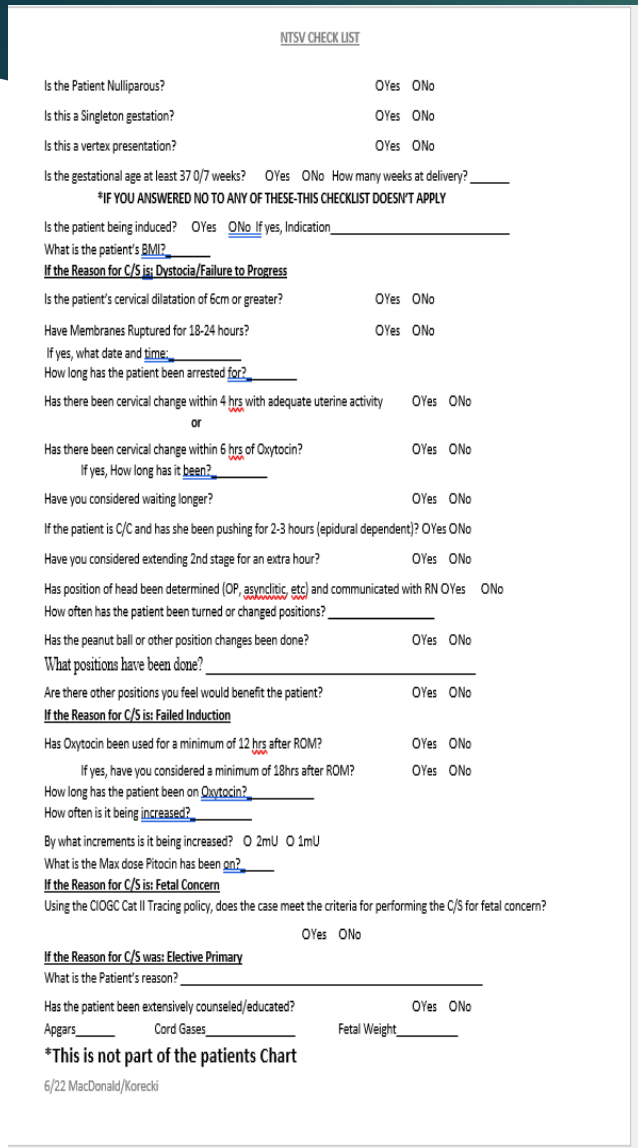


Key Success Factors

1. Provider Communication:

- Collaborative culture and teamwork.
- Regular interdisciplinary meetings to review cases and share best practices.
- Standardized language to ensure clear expectations.

Key Success Factors



NTSV CHECK LIST

Is the Patient Nulliparous? OYes ONo

Is this a Singleton gestation? OYes ONo

Is this a vertex presentation? OYes ONo

Is the gestational age at least 37 0/7 weeks? OYes ONo How many weeks at delivery? _____

***IF YOU ANSWERED NO TO ANY OF THESE-THIS CHECKLIST DOESN'T APPLY**

Is the patient being induced? OYes ONo If yes, Indication_____

What is the patient's BMI?_____

If the Reason for C/S is: Dystocia/Failure to Progress

Is the patient's cervical dilatation of 6cm or greater? OYes ONo

Have Membranes Ruptured for 18-24 hours? OYes ONo

If yes, what date and time:_____

How long has the patient been arrested for?_____

Has there been cervical change within 4 hrs with adequate uterine activity OYes ONo

or

Has there been cervical change within 6 hrs of Oxytocin? OYes ONo

If yes, How long has it been?_____

Have you considered waiting longer? OYes ONo

If the patient is C/C and has she been pushing for 2-3 hours (epidural dependent)? OYes ONo

Have you considered extending 2nd stage for an extra hour? OYes ONo

Has position of head been determined (OP, asynclitic, etc) and communicated with RN OYes ONo

How often has the patient been turned or changed positions? _____

Has the peanut ball or other position changes been done? OYes ONo

What positions have been done? _____

Are there other positions you feel would benefit the patient? OYes ONo

If the Reason for C/S is: Failed Induction

Has Oxytocin been used for a minimum of 12 hrs after ROM? OYes ONo

If yes, have you considered a minimum of 18hrs after ROM? OYes ONo

How long has the patient been on Oxytocin?_____

How often is it being increased?_____

By what increments is it being increased? O 2mU O 1mU

What is the Max dose Pitocin has been on?_____

If the Reason for C/S is: Fetal Concern

Using the CIOGC Cat II Tracing policy, does the case meet the criteria for performing the C/S for fetal concern?

OYes ONo

If the Reason for C/S was: Elective Primary

What is the Patient's reason? _____

Has the patient been extensively counseled/educated? OYes ONo

Apgars_____ Cord Gases_____ Fetal Weight_____

***This is not part of the patients Chart**

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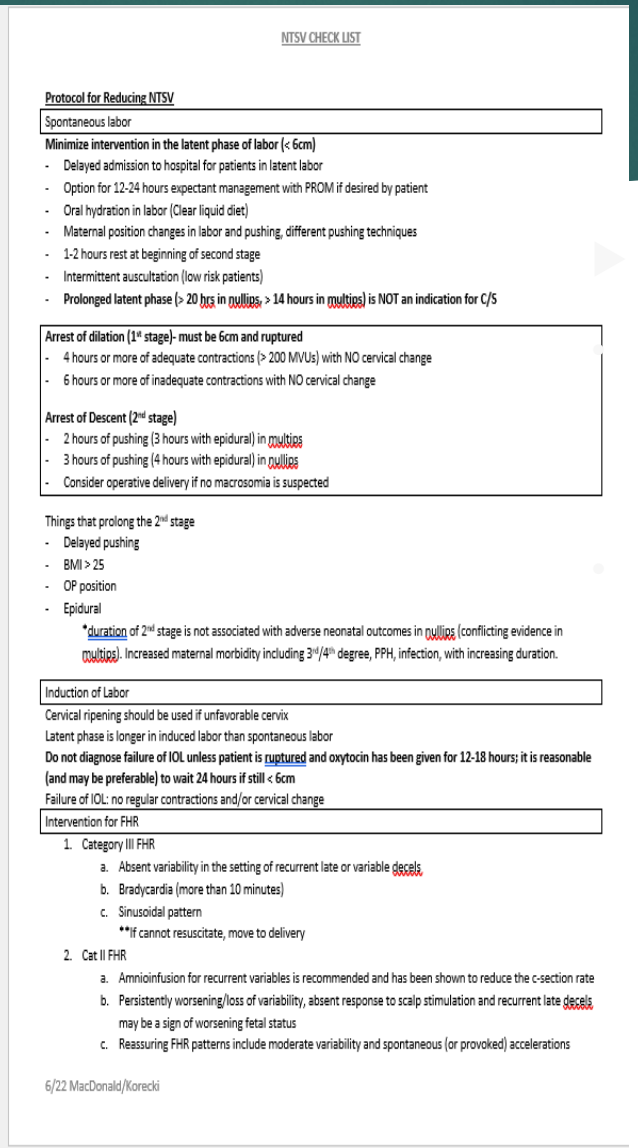

NTSV CHECK LIST

Protocol for Reducing NTSV

Spontaneous labor

Minimize intervention in the latent phase of labor (< 6cm)

- Delayed admission to hospital for patients in latent labor
- Option for 12-24 hours expectant management with PROM if desired by patient
- Oral hydration in labor (Clear liquid diet)
- Maternal position changes in labor and pushing, different pushing techniques
- 1-2 hours rest at beginning of second stage
- Intermittent auscultation (low risk patients)
- **Prolonged latent phase (> 20 hrs in nullips, > 14 hours in multips) is NOT an indication for C/S**

Arrest of dilation (1st stage)- must be 6cm and ruptured

- 4 hours or more of adequate contractions (> 200 MVUs) with NO cervical change
- 6 hours or more of inadequate contractions with NO cervical change

Arrest of Descent (2nd stage)

- 2 hours of pushing (3 hours with epidural) in multips
- 3 hours of pushing (4 hours with epidural) in nullips
- Consider operative delivery if no macrosomia is suspected

Things that prolong the 2nd stage

- Delayed pushing
- BMI > 25
- OP position
- Epidural

*duration of 2nd stage is not associated with adverse neonatal outcomes in nullips (conflicting evidence in multips). Increased maternal morbidity including 3rd/4th degree, PPH, infection, with increasing duration.

Induction of Labor

Cervical ripening should be used if unfavorable cervix

Latent phase is longer in induced labor than spontaneous labor

Do not diagnose failure of IOL unless patient is ruptured and oxytocin has been given for 12-18 hours; it is reasonable (and may be preferable) to wait 24 hours if still < 6cm

Failure of IOL: no regular contractions and/or cervical change

Intervention for FHR

1. Category III FHR
   a. Absent variability in the setting of recurrent late or variable decels
   b. Bradycardia (more than 10 minutes)
   c. Sinusoidal pattern
   **If cannot resuscitate, move to delivery
2. Cat II FHR
   a. Amnioinfusion for recurrent variables is recommended and has been shown to reduce the c-section rate
   b. Persistently worsening/loss of variability, absent response to scalp stimulation and recurrent late decels may be a sign of worsening fetal status
   c. Reassuring FHR patterns include moderate variability and spontaneous (or provoked) accelerations

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2. NTSV Checklist:

Criteria to guide decision-making for cesarean deliveries.

Example items: maternal status, fetal monitoring, second-stage labor progression.

Key Success Factors

- **3. Spinning Babies Techniques:**
- Focus on optimal fetal positioning through manual maneuvers and exercises.
- Training for staff and patient education during prenatal visits.

Data Tracking and Analysis

Continuous quality improvement (CQI) initiatives.

Monthly review of NTSV cesarean cases.

Use of dashboards and data visualization to track trends.

Staff Education and Engagement

- Regular training sessions on NTSV reduction strategies.
- Engagement of obstetricians, techs, and nurses.
- Leadership's role in fostering a supportive environment.

Challenges and Solutions

- **Challenges:**
- Resistance to change among providers and nurses.
- Integrating new protocols and practices into existing workflows.

- **Solutions:**
- Ongoing hands-on education and reinforcement of best practices.
- Inclusion of staff feedback to refine processes.

Patient Education and Advocacy

Prenatal counseling: realistic expectations about labor and delivery.

Emphasis on shared decision-making.

Improved patient satisfaction and empowerment.

Steps toward Implementation

Conclusion

There are some things we are doing great and others we will continue to work towards.

- Standardizing staff education for all new hires
- Continuously supporting the staff in repositioning the patient
- Ensuring the equipment is available to the staff
- Continue with data monitoring and improvement
- Patient education pre-admission (office and triage visits) including providing resources.

Resources

- Cate, J., Haynes, M., Arkfeld, C., Lee Illuzzi, J., Campbell, K., & Raab, C. Preventing the Primary Cesarean Delivery—Adherence to Labor Arrest Guidelines [28P]. Obstetrics & Gynecology 135():p 174S-175S, May 2020. | DOI: 10.1097/01.AOG.0000663864.95070.be
- https://www.spinningbabies.com/