Grant Application

1	**Project Title**	**Reducing Primary Cesarean Section**
2	Clinical or Operational Area	Labor and Delivery
3	Healthcare System	Advent Health
4	Hospital or Entity Name	Shawnee Mission
5	Applicant Name	Lauren Galli
6	Applicant Title	Director, Labor and Delivery
7	E-mail Address	lauren.galli@adventhealth.com
8	Telephone	913-632-4225
9	Mailing Address, City, State, Zip Code	9100 W 74th St. Shawnee Mission, KS 66204
10	**Please list the names and titles/roles of the additional members of the project team:**	
	Name:	**Title/Role:**
	Kimberly Nash	MSN, RN / Clinical Nurse Educator
	Katherine Davis	BSN, RN-C / Clinical Nurse Educator
11	Name of Senior Risk Management or Corporate Insurance Representative	Lori Cue BSN, MA, CPHQ, CPHRM
12	Mailing Address, City, State, Zip Code	9100 W 74th St. Shawnee Mission, KS 66204

13. The issue being addressed involves the following clinical areas: ***(Check all that apply)***

- ☐ Ambulatory Care
- ☐ Emergency Services
- ☐ Hospital/System-wide Focus
- X☐ Obstetrics/Perinatal
- ☐ Radiology/Imaging Services
- ☐ Surgical/Peri-Operative
- ☐ Other (Please specify)

Click or tap here to enter text.

14. Briefly describe the project and its importance to the organization: ***(two paragraphs maximum, please attach any supporting documentation)***

The primary cesarean section rate in nulliparous, term, singleton, vertex pregnancies continues to increase despite calls from the World Health Organization for a reduction. The rate of primary cesarean delivery in this population in

our facility remains above the WHO Healthy People 2020 recommendation of less than 24%. Compounding the issue is the fact that many women whose first delivery is via cesarean, go on to have repeat cesarean deliveries. Cesarean delivery is more costly than vaginal delivery both in terms of actual dollars and the maternal morbidity that is a result of a major abdominal surgery. In addition, research has not shown significant decreases in neonatal morbidity or mortality to be associated with the rise in cesarean delivery.

Advent Health Shawnee Mission Labor and Delivery is seeking to improve our continuous labor support for patients. Continuous labor support will allow more nursing time spent at the bedside, assisting and supporting the laboring woman in her goal of a healthy, vaginal delivery. Studies have found that labor and delivery units that have made deliberate decisions to improve and increase continuous labor support, have had increases in vaginal deliveries in first time mothers and decreases in operative vaginal births. Recipients of continuous labor support also report lower pain scores, less fear and anxiety, and more perceived control throughout the labor process. These positive perceptions of labor and birth further transferred into adaptation to motherhood and reduction in perinatal mental health disorders.

15. **Describe how this project will improve patient safety or reduce the potential for liability.** ***(one paragraph maximum)***

When patients are anxious or fearful about labor and delivery, the body releases stress hormones, catecholamines, that interfere with uterine blood flow and oxytocin release. Impaired uterine blood flow and/or inadequate uterine contractions may cause labor dystocia or fetal intolerance to labor. However, when nurses have the necessary training and tools to help women cope during labor and delivery, they are better qualified to provide continuous labor support to their patients. Studies have shown a correlation between continuous labor support and shorter length of labor, fewer instrumental vaginal deliveries, increased rates of spontaneous vaginal births, and improved birth satisfaction overall.

16. **What metric(s) will be used to measure progress and determine the success of this project??** ***(one paragraph maximum)***

The successfulness of the project will be measured by a quarterly review of cesarean section rates for the nulliparous, term, singleton, vertex population.

17. **Please describe the tangible results of the project that can be quantified and shared as best practices with other AEIX members?** ***(one paragraph maximum)***

The most apparent tangible result of a successful project will be a decrease in the primary cesarean rate in the target population. In addition, data can be extracted from the EMR to evaluate if continuous labor support affected length of labor and/or operative vaginal delivery in the target population after training has been completed with labor and delivery staff. Lastly, in an effort to understand the psychosocial effects of continuous labor support, the facility may survey patients about their labor experience to evaluate specific components related to the emotional, cultural, psychological, informational, and educational components of continuous labor support.

18. **Please provide a financial estimate of the project** Total cost of the project would break down as follows:
    Physiologic Birth Class virtual training for all labor and delivery nurses from Bundle Birth – licensed, on-demand course presented twice = $7000
    Kaya Birth Stool / positioning tool (total of 3 for unit) = $1650
    Novii wireless fetal monitoring system and extra pods and mini telemetry fetal monitor = $7000
    Environmental enhancements – Bluetooth speakers, aromatherapy, electric candles = $850
    Total = $16,500

19. **What is the expected timeframe for completion of this project?** 9 months

20. Is this project based on successful practices evaluated from literature or other healthcare providers? ☒ Yes ☐ No

21. Is this project based on an original concept created by the project team? ☐ Yes ☒ No

22. Do you have plans to publish the project results in a professional publication or networking forum? ☒ Yes ☐ No

23. Is there anything else you'd like to share about this project?

Advent Health Shawnee Mission is excited to use this project as a steppingstone towards lowering our cesarean birth rate in the target population. By providing enhanced training and labor support tools to staff we hope to impact the cesarean birth rate for first time mothers so we can further reduce the rising cesarean birth rate.

Signatures required to submit this application

Primary Clinical Sponsor (The individual responsible for monitoring progress of the project, submitting receipts and other documentation supporting the use of grant funds, and will provide a summary report of the project outcome)

Signature | Labor and Delivery Director | 8/16/24
Title | Date

Alternate Clinical Sponsor (The individual responsible for supporting the responsibilities of the Primary Clinical Sponsor, and assuming those responsibilities if the Primary Clinical Sponsor is unable to fulfill the requirements of the project)

Signature | Clinical Nurse Educator | 8/16/24
Title | Date

Senior Risk Management Leader

Signature | Admin Director Quality Risk + Safety | 8/16/24
Title | Date

CEO or CFO of Applicant's Healthcare Facility

Signature | CFO | 08/16/24
Title | Date

Thank you for completing the application. Please follow these next steps.

- Save this document in Word format and gather your supporting documentation.

- Forward the application and documentation to your senior risk management leader or corporate insurance representative. *They will need to complete and sign the Evaluation of Awards Application Form on the final page of the application before submitting it to American Excess Insurance by* ***Friday August 16, 2024****.*

Evaluation of Grant Application

The evaluation must be completed and signed by the senior risk manager or corporate insurance representative. Please evaluate the Award Application by indicating the best answer to the question.

1. **How will this project improve safety and/or reduce liability?**

   ☐ Little effect on safety and liability (1)
   ☐ Some improvement but metrics are not defined and/or it is not clear that measurable effect can be sustained (2)
   ☒ Strong effect with clearly defined metrics (3)

2. **What is the potential to share this project or practice with other AEIX members?**

   ☐ Little potential – i.e. *implementation requires major budgetary commitment, topic is highly specialized, and/or metrics are not clearly defined* (1)
   ☐ Some potential but process may be hard for another organization to implement, and/or its application may be limited
   - i.e. major budgetary commitment, topic is highly specialized, and/or metrics are not clearly defined (2)
   ☒ Strong potential for producing best practices (3)

3. **What level of impact will this project or practice have on the severity of risk exposure?**

   ☐ Little chance of impacting severity of risk but could address other issues (1)
   ☐ Some potential to impact risk exposure (2)
   ☒ Strong ability to impact severe malpractice exposure caused by significant risk events (3)

4. **What level of innovation best describes this project?**

   This would help with our loss run + action plan for the risk assessment

   ☒ Project/practice is new to this organization and is based primarily on firmly established best practices (1)
   ☐ Project/practice was created primarily by applicants with some assistance from an outside vendor and contains well-established best practices with additional innovative features (2)
   ☐ Project/practice was created solely by applicants and could be included in established literature or industry best practices (3)

5. **Share your comments or recommendations.**

Jennifer Lorenzo — Admi Director of Quality, Risk + Safety — 8-16-24
E-Signature **Title** **Date**

Click or tap here to enter text. — lorenzo@Adventhealth.com
Phone **Email**

Send the completed application in Word format, supporting documentation, and signed evaluation to lana_taylor@premierinc.com *by* ***Friday August 16, 2024.***

Thank you for your submission. In continued pursuit of our mission and vision to partner with forward-thinking healthcare leaders, inspire innovation, and provide the leading pathway for managing risk, we may share your project with other members of American Excess. However, this project will not be shared outside of the American Excess Insurance membership without your prior consent.

The primary cesarean section rate in nulliparous (first pregnancy), term, singleton, vertex (NTSV) pregnancies has increased dramatically over the last decade. Despite the World Health Organization's Healthy People 2020 recommendation for reducing the primary cesarean rate in this population to fewer than 24.7%, (Liddle, 2022) the United States continues to struggle with a primary c-section rate of nearly 26% (Andrikopoulou et al., 2021). Our hospital's current primary cesarean rate of 24.8% in NTSV deliveries mirrors this. Adding to the number is the fact that most women whose first delivery ended via cesarean will have repeat deliveries by the same route, resulting in nearly one third of all U.S. births occurring by means of cesarean section (Andrikopoulou et al., 2021).

Though cesarean section is often unplanned and sometimes performed urgently or emergently, it is important to remember that a cesarean section is still a major abdominal surgery and does not come without risks. In addition, research has not shown significant improvement in maternal or neonatal morbidity and mortality to be associated with the rise in cesarean delivery (Main et al., 2019). Given this information, along with consideration of the increased cost of a cesarean delivery (Andrikopoulou et al., 2021) related to longer hospital stay, and prolonged healing time it just makes sense for hospitals to invest in the tools and training needed to increase successful NTSV vaginal delivery.

According to the Association for Women's Health Obstetric and Neonatal Nursing, one of the keys to improve women's experiences during labor and delivery along with increasing vaginal delivery rates for NTSV patients, is to provide continuous labor support (Page et al., 2021). Page et al. (2021) has defined this as "nonmedical care provided during labor and birth by trained people that

may involve physical, emotional, informational, and advocacy support and that focused on helping women cope during labor" (p.317)

Components of continuous labor support may include:

- Creation of a calm and supportive environment where patients and their partners feel safe and empowered to be involved in their care
- Promoting shared decision making, and respecting the patient / family's right to choose
- Supporting autonomy and control through the use of birth plans
- Reassurance, encouragement, and affirmation
- Hydrotherapy
- Upright maternal positioning and freedom of movement
- Frequent position changes / culture of mobility
- Use of labor support equipment including birth balls, peanut balls, Bluetooth-enabled EFM, and birth chairs / positioners such as the Kaya birth chair
- Complementary therapies such as aromatherapy, heat and cold therapy, massage and acupressure, and music therapy
- Breathing and relaxation techniques
- Hydration and nutrition via oral intake for low-risk laboring women
- Intermittent auscultation of fetal heart tones in appropriate low-risk patient populations (AWHONN, 2022).

In providing continuous labor support, patients feel supported and cared for during labor, which leads to a decrease in anxiety and fear and the associated stress hormones,

catecholamines (AWHONN, 2022). When catecholamines are kept in check, there is improved blood flow to the uterus and oxytocin release is optimized for labor progression (AWHONN, 2022). As a result, continuous labor support has been attributed to:

- Increased rates of spontaneous vaginal birth
- Decrease in instrumental vaginal delivery
- Shorter length of labor
- Lower pain scores
- Improved birth satisfaction
- Reduction in perinatal mental health problems, specifically the risk of posttraumatic stress disorder related to labor and delivery (AWHONN, 2022).

Although the reasons for the continued rise in primary cesarean rate may vary between patients, research has identified healthcare system barriers and nursing actions that can hinder a successful vaginal birth. These include adequate staffing ratios, personal beliefs surrounding labor and birth, confidence in labor support skills, labor support education, unit equipment, policies that promote continuous labor support (Page et al., 2021), and the unit culture and practices (Heelan-Fancher & Edmonds, 2021).

As a nursing unit, Advent Health Shawnee Mission, Labor and Delivery seeks to improve nurse self-efficacy related to labor support through training and tools specific to labor and delivery. Training will consist of an eight-hour virtual workshop for all staff – experienced and new – through Bundle Birth, titled "Supporting Physiologic Birth for L&D Nurses." In addition, more labor support equipment will be purchased for the unit including Kaya birth chairs, aromatherapy, more mobile /

Bluetooth enabled fetal monitoring units to encourage a culture of mobility, and items to support a calm and relaxing environment such as soft lighting and music. Currently, we strive to staff according to AWHONN standards to allow a 1:1 nurse to patient ratio during active labor and at delivery. This continued staffing model will also assist in meeting our goal of continuous labor support in an effort to decrease cesarean delivery for NTSV patients. We are confident that as our nurses become more secure in their labor skills at the bedside, and with continued support of organizational and leadership policies, we will have a direct impact on lowering the primary cesarean section rate among the NVST population.

References

Andrikopoulou, M. W.-J. (2021). Population risk factors for nulliparous, term, singleton, vertex, caesarean birth: a national cross-sectional study. *British Journal of Obstetrics and Gynaecoloty*, 1456-1463.

Association for Women's Health, O. a. (2022). *Labor support for intended vaginal birth: Evidence-based clinical practice guideline.* Washington, DC: AWHONN.

Heelan-Fancher, L. &. (2021). Intrapartum nurses' beliefs regarding birth, birth practices, and labor support. *Journal of Obstetrics, Gynecologic & Neonatal Nursing*, 753-764.

Liddle, D. (2022). Effects of Labor Support Education on Nursing Knowledge, Confidence, and Cesarean Rates. *Association of Women's Health Obstetric and Neonatal Nurses.* Aurora.

Main, E. C. (2019). Safety assessment of a large-scale improvement collaborative to reduce nulliparous cesarean delivery rates. *Obstetrics & Gynecology*, 613-623.

Page, K. E. (2021). Improving nurse self-efficacy and increasing continuous labor support with the promoting comfort in labor safety bundle. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 316-327.