Creating and Implementing a Trauma-Informed Birth Plan in a Midwifery Practice: A Quality Improvement Project

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NURS 703B: DNP Project Planning

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Abstract

Childbirth can incite trauma responses that have lasting primary impacts on parents and their offspring with secondary effects on provider care teams.

Aims: This quality improvement project created a trauma-informed birth plan template using an innovative application of the framework developed by the National Center for Trauma Informed Care, which provides standardization of principles of trauma-informed care and ways to conceptualize, interact with, and respond to trauma in various manifestations in healthcare settings. The birth plan was offered in both standard prenatal care visits and group prenatal care settings in a midwifery practice in an academic hospital in the Pacific Northwest. In addition to creating a trauma-informed birth plan, the goal of this project was to understand midwives' impressions of its function in prenatal and intrapartum care and optimal workflow of integrating the birth plan into an active midwifery practice.

Background: There were data to support the use of birth plans in mitigating adverse health outcomes during pregnancy and childbirth. The birth plan is a written document that is used to describe the preferences of the birthing patient to their care team. Studies suggest that the collaborative component of a birth plan results in higher perceived preparation and birth experience satisfaction, as well as positive impacts on obstetric interventions and maternal and neonatal outcomes. Although there were many birth plan templates in existence, none found in the literature were built with a trauma-informed framework.

Methods: The birth plan was created based on the four principles of trauma-informed care as designated by the National Center for Trauma-Informed Care through the Substance Abuse and Mental Health Services Administration. The quality improvement project followed the Institute for Healthcare Improvement model with data tracked over three Plan-Do-Study-Act cycles. Midwives were presented with education regarding trauma-informed care and surveyed for their understanding and buy-in. The

birth plan was then offered in group prenatal care sessions and midwives were qualitatively surveyed on their impressions on the impact of the birth plan on prenatal and intrapartum care.

Findings: 100% (27/27) of midwives were offered birth plan training. 44% (12/27) of midwives completed the post-training survey. 100% (8/8) of midwives offered the birth plan during group prenatal care. 44% (12/27) of midwives provided post-project feedback.

Conclusion: Midwives in this practice found the birth plan to be useful for clinical care as a standardized tool to discuss trauma prenatally. Project workflow will be revised for expanded access within the practice.

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Problem Description

Pregnancy and childbirth, while both normal physiologic processes, are often complex and produce heightened emotional responses from those involved. The purpose of this project was twofold: to understand the impact of birth plans on birth experience, and to overlay a trauma-informed framework on the creation of a birth plan. The principle of trauma-informed care integrates an understanding of trauma recognition with a universal approach of considering medical and surgical histories and current symptoms within the context of previous or current traumas (Ades et al., 2019; Purkey et al., 2018). When combined with the process of shared decision-making, a birth plan is thought to enhance communication of expectations, information-sharing, and goal-setting between patients and providers (Guo et al., 2023). The objective using a birth plan is to enhance agency, information-sharing, and decision-making within the healthcare setting (López-Gimeno et al., 2022). There is a gap of knowledge in the existent literature related to the role and efficacy of birth plans designed with a trauma-informed framework.

In a large urban academic medical center practice in the Pacific Northwest, the midwifery practice sought to understand the role of birth plans in enhancing communication and improving the birth experience between patients and providers. The practice wanted to focus on operationalization of a birth plan formed with a trauma-informed lens. The overarching goal of the project was to create a tool to support providers in performing trauma-informed care. Important components of this project included investigating trauma-informed language and framework for the birth plan and disseminating it during group prenatal care visits to have the greatest impact on birth experiences and perceptions of care.

Literature Review

Birth Plans

Ever since the birth plan was formally conceptualized by Penny Simpkin, PT, and Carla Reinke, CNM, in 1980 in the United States, it has been a subject of interest for the birthing community (Kaufman, 2007; Simpkin & Reinke, 1980). While teaching childbirth education classes, Simpkin and Reinke conceived of a written document to encourage informed decision-making, communication, and cooperation between providers and patients (Simpkin, 2007). A birth plan is a written document that records desires, choices, and preferences surrounding childbirth, and as circumstances change, so too can the birth plan. It is used to enhance communication and facilitate autonomy and decision-making between patients and providers regarding childbirth (Ghahremani et al., 2023).

There is no universal standardized birth plan template; however, many developed countries favor use of a birth plan in their maternity care guidelines (Mohaghegh et al., 2022). The national maternity health services in Scotland, England, Australian, the Netherlands, and Canada have position statements that support birth plans as options for pregnant patients. Australia and the UK offer templates for families to complete and bring to their prenatal visits and labor admissions. In the UK, where the National Health Service has incorporated birth plans into routine maternity care since the 1980s, a birth plan is part of the care in 78% of deliveries (Ahmadpour et al., 2022; Divall et al., 2017). Many birth plans consist of checklists, like Australia's, to inform on preferences in labor regarding pharmacological agents, labor progress, newborn care, and instrumental or surgical procedures, while others also provide space for commentary and explanations, like the one in use in the UK (Ahmadpour et al., 2022). In the US, the American College of Obstetricians and Gynecologists (ACOG) provides a sample birth plan, but unlike most, it does not recognize other providers like midwives, and it is the only birth plan to contain a disclaimer statement (see Appendix A for the Australian, British, and US birth plans).

A literature review was completed to investigate the available research on trauma-informed approaches to creating and implementing birth plans. However, no extant research was discoverable that combined trauma-informed care and birth plans. As such, the literature review was expanded to examine birth plans and trauma-informed approaches during perinatal care, specifically during care provided through a group prenatal care structure, and their respective associated birth outcomes. The term 'birth plan' is widely used in the literature while terms like 'birth worksheet' or 'birth preference sheet' uncovered no search results; thus, for generalizability, 'birth plan' will be used henceforth in this paper. A comprehensive search of the literature was performed using the Oregon Health and Science University library database and the CINAHL database as well as additional sources found on the reference lists of selected studies. Singularly and in combination with the terms "birth plan," "midwife," "group prenatal care," and "trauma-informed" without filters for publication year or language, the search resulted in less than 100 relevant studies, and four recent randomized controlled trials (RCTs) of high-quality primary evidence. Interestingly, the bulk of the recent research was conducted outside of the United States and centered on birth outcomes and shared decision-making.

Many studies that examined the use of birth plans simultaneously collected data on patient satisfaction rates, birth outcomes, and interventions. The findings of the RCTs point toward the collaborative component of the birth plan resulting in higher rates of perceived educational preparedness and birth experience satisfaction for patients, as well as significant impacts on obstetric interventions and maternal and neonatal outcomes including less oxytocin use, amniotomy, epidural anesthesia use, NICU admissions, and higher Apgar scores (Afshar et al., 2018; Ahmadpour et al., 2022; Guo et al., 2023; López-Gimeno et al., 2022). An RCT from Iran (n=106) found significantly higher ($P<0.001$) rates of birth experience satisfaction scores, higher levels of perceived support and control, and lower rates of posttraumatic stress disorder and lower rates of cesarean section in patients who developed a birth plan with their provider compared to those who did not have one (Ahmadpour et al.,

2022). Guo et al. (2023) found that primiparous patients (n=90) in China with birth plans had a cesarean section rate of 20% compared to 57% of those without a birth plan (P=0.003), significantly less anxiety in the second stage (P<0.001), and higher rates of satisfaction with prenatal, intrapartum, and postpartum care when surveyed postpartum (P<0.001). Two of the RCTs in the Unites States and China found significantly lower rates of NICU transfers (4% versus 12%, P<0.02; 24% versus 76%, P=0.006), respectively, in patients who used birth plans (Afshar et al., 2018; Guo et al., 2023).

Adding to the RCT maternal findings, Hidalgo-Lopezosa et al. (2021), in a retrospective case controlled study in Spain, found that those who used a birth plan had lower cesarean section rates (18% versus 29%, P=0.27) but that there was no difference in rates of perineal lacerations, instrumental deliveries, or episiotomies; those without a birth plan were more likely to receive oxytocin (43% versus 55%, P=0.010), amniotomy (56% versus 34%, P<0.001), and epidural anesthesia (80% versus 70%, P=0.009). A retrospective cross-sectional study in Spain found that each group that was counseled using birth plans reported high levels of satisfaction (P=0.224) and received high amounts of relevant information (P=1.0) (López-Gimeno et al., 2022). Additionally, the birth plan group was noted to have immediate postpartum outcomes including higher rates of breastfeeding initiation in the delivery room (84% versus 66% of those who did not have a shared decision-making component, P=0.001) and immediate skin-to-skin contact (aOR-2.08, 95% CI: 107-4.04) (López-Gimeno et al., 2022). A retrospective case-controlled study in Spain (n=457) also found that those patients who used birth plans delivered neonates with higher one-minute APGARs and umbilical cord pH values, and were more responsive overall to resuscitation (Hidalgo-Lopezosa et al., 2021).

Studies examining birth plans differ on the intent and directional flow of information on the birth plan, with some researchers grouping birth plans with other tools to help healthcare providers offer information to patients, while others recognize it as a tool to help patients inform providers of their intentions and expectations for delivery (Bell et al., 2022; López-Gimeno et al., 2022; Pinheiro & Sardo,

2019). There were several qualitative studies that examined degrees of satisfaction with birth experiences and the findings were mixed regarding whether patients or providers perceived that birth plans improved overall birth experiences. The research suggests that care providers were more satisfied with birth plan usage when they viewed birth plans as a useful tool to identify and address misconceptions and anxieties prenatally (Afshar et al., 2018; Mei et al., 2016). For patients, satisfaction rates were higher if their expectations as listed in the plan were met (Mei et al., 2016). Additionally, patients expressed higher levels of satisfaction based on feelings of being more respected and heard rather than exclusively on obstetric, maternal, or neonatal outcomes (Bell et al., 2022). A qualitative study used a postpartum take-home survey mailed immediately upon discharge to assess satisfaction among Japanese mothers who used birth plans while in labor (n=442). The authors found that birth plans were helpful tools to reaffirm patient autonomy and that patients used birth plans for reference, guidance, information holding, and developing expectations surrounding the birth (Sato & Umeno, 2011). A Canadian study added to these findings that although patients and their support team viewed birth plans as valuable and recognized their significance as educational and communication tools, there was risk of disappointment for patients if the elements detailed in the birth plan were not acted upon (Aragon et al., 2013). A postpartum survey of women with high-risk pregnancies (n=271) in Sweden found that those women who used birth plans had lower scores of trust in their midwife while laboring ($p=0.031$), had a lower sense of control ($p=0.023$), and felt like the midwife was less attentive to their concerns and desires than women with low-risk deliveries without a birth plan ($p=0.021$) (Berg et al., 2003). The authors found that women who presented in labor with a birth plan compared to those without one rated higher levels of constant fear of birth complications (41% vs. 14%, $p=0.007$), which the authors concluded to indicate higher levels of emotional vulnerability in the high-risk group although they note that the inability to randomized the groups detracted from these results (Berg et al., 2003). With similar results, researchers in the United States found that patients with birth plans described

feeling out of control and were less satisfied with their birth experience than patients without birth plans (Mei et al., 2016). A high number of requests listed in the birth plan was inversely related to overall satisfaction with birth, while a higher percentage of fulfilled requests was associated with higher satisfaction of birth (Mei et al., 2016). In an Australian systematic review, Bell et al. (2022) found that birth plan use is associated with positive outcomes, including improved satisfaction and sense of control to constructing realistic expectations, when in tandem with a collaborative relationship between patients and providers.

There were fewer studies that examined provider perspectives on the use and efficacy of birth plans in the clinical setting. Of the four identified studies, all were qualitative in design. One occurred in Iran and three in the United States. The latter three used national anonymized online surveys to collect data. A small sample of providers in Iran (n=11) with 82% physician and 18% midwife respondents found that providers viewed birth plans as a tool to strengthen care team communication and establish respect for the mother (Mohaghegh et al., 2022). In the United States, Grant et al. (2010) compared healthcare providers (n=103) to patients (n=113) and found that 65% of providers versus 2% of patients associated birth plans with worse outcomes, 66% versus 9% associated birth plans with higher risk of cesarean sections, and 53% versus 10% with increased risk of intrauterine infections. However, the researchers did not have the data from deliveries to compare perception with reality (Grant et al., 2010). The second American study collected responses from providers (n=567) that were ultimately unfavorable to the use of birth plans, with physicians accounting for 77% of the responses and midwives for 22% (Afshar et al., 2019). The researchers found that 66% of providers did not recommend birth plans, and 31% felt that birth plans were predictors of poor obstetric outcomes, while only 25% felt that birth plans led to favorable patient experiences. Another study found that increasing provider age and providers with more years in practice were positively associated with favorable views on birth plans in terms of both patient satisfaction (p value <0.01) and obstetrical outcomes (p value $=0.001$) (Mei et al., 2016). Providers

who had higher clinical volumes were more likely to recommend birth plans (p value=0.009) (Mei et al., 2016). While the results did not differentiate between provider type, the authors noted that providers cited lack of information on the risk of using birth plans intrapartally as to why they had unfavorable views (Mei et al., 2016).

The practice recommendation released by the Association of Women's Health, Obstetric, and Neonatal Nurses (AWHONN) endorsed the use of shared decision-making to prepare birth plans (AWHONN, 2022). AWHONN advised centering care around birth plans whenever possible to express preferences and retain control while in labor (McGlothen-Bell et al., 2022). The American College of Nurse Midwives (ACNM) published a position statement on shared decision-making, recently updated in 2022, although neither they nor ACOG had position statements regarding birth plans (ACNM, 2023). This literature review left room for further research regarding perspectives on the birth experience where even with positive birth outcomes, there were discrepancies in beliefs amongst patients and providers regarding efficacy.

There were several limitations of the available literature. Many studies focused on qualifying perceptions and opinions, on which it was challenging to build productive frameworks and practice changes. The majority of these studies did not use a standardized birth plan, nor did they propose a standardized framework for shared decision-making, which might enhance individualized collaboration between providers and patients. One RCT revealed that only 57% of patients who were educated on birth plans and offered to construct a birth plan did so, compared to 75% of their counterparts who did not receive structured birth plan education yet brought in birth plans for their deliveries (López-Gimeno et al., 2022). The latter data was supported by a Canadian cross-sectional qualitative study that found that 70% of birthing women (n=232) brought birth plans unprompted to their deliveries (Aragon et al., 2013). However, the RCT researchers did not follow up with patients regarding their choices to accept or reject birth plans but did find that 75% of providers did not ask for the birth plan upon presentation to

the labor unit (López-Gimeno et al., 2022). As a result of the insufficient integration between the research design and practices of the birthing unit, the majority of women did not utilize their birth plan, which reflected poorly on patent-provider relationship-building with minimal focus on shared decision-making. Additionally, the researchers did not standardize the education disseminated by providers which reflected on the level of provider and patient buy-in, so improving fidelity would be essential in future studies. The lack of buy-in and high-fidelity were common threads throughout the literature (López-Gimeno et al., 2022). Inclusion criteria in most studies focused on singleton, cephalic pregnancies over 34 weeks of gestation when a vaginal birth was planned. Many studies noted that the patients who choose birth plans trended as older with higher levels of education and financial stability and were primiparous; this excludes vulnerable populations who might benefit even more greatly from interventions focused on improving birth outcomes and experiences.

The overall level of evidence was mixed in support of birth plans; however, it is important to note that because much of the available research was conducted outside of the United States the trends might not be easily generalizable to a United States-based population. The role and practice scope of midwives varies regionally and globally. Furthermore, there may be differences in populations who received care with different types of providers, between midwives and physicians as well as in midwifery-led practices compared to collaborative practices. More high-quality empirical based, randomized controlled studies or meta-analyses are necessary to evaluate not only the structure and appropriate presentation and follow-through for birth plans, but to also assess their impact on specific birth outcomes for parents and neonates.

Trauma-Informed Approaches

The literature on the impact of trauma-informed approaches to perinatal outcomes was even more sparse compared to the literature on birth plans. Trauma-informed approaches to care recognize that many patients and providers have a history of trauma, which is defined by the Substance Abuse and

Mental Health Services Administration (SAMHSA) as a physically or emotionally harmful event or series of events that have lasting adverse effects on function and well-being (SAMHSA, 2014). It involves understanding that responses, perceptions, and processing of trauma were unique to the individual, yet can be long-lasting, cultural, pervasive and context specific. Trauma-informed care refers to systemic level focus on resilience as well as vigilance in anticipating and resisting processes and practices that might cause retraumatization (SAMHSA, 2014). Much of the current research on trauma-informed approaches was theoretical. Only two recent studies were isolated from the literature that examined the intersection of maternal and neonatal outcomes and implementation of trauma-informed approaches in provision of prenatal care; however, both found positive, statistically significant correlations between implementation of a trauma-informed framework and health outcomes. One Canadian retrospective cohort study on low risk dyads (n=601) found that infants of mothers who received trauma-informed care had fewer adverse health effects than infants of mothers who did not receive trauma-informed care (30% versus 37%, P=0.046), but maternal outcomes did not differ between groups (P=0.15) (Racine et al., 2021). The trauma-informed framework cohort included explicit conversations between patients and providers, a peer champion, staff training in trauma-informed approaches, standardized screening for childhood trauma and mental health, and an established strategy for mental health referrals (Racine et al., 2021). The second retrospective cohort study investigated the impact of trauma-informed care on a high-risk population (n=844) of adolescent mothers in the United States, of whom 45% identified as Hispanic and 37% identified as Black (Ashby et al., 2019). Using leverage of power differentials and patient autonomy as paramount in their model of care, the team implemented trauma-informed care at the initial visit and rescreened for trauma and provided psychosocial evaluations at 28 weeks of gestation, finding that 30% of their patients endorsed a history of trauma, and of those 64% had experienced sexual abuse. This study found positive trends in both neonatal and maternal outcomes within a trauma-informed framework compared to without trauma-informed care, with significantly

lower rates of low birth-weight babies (6% versus 11%, P=0.02) and higher rates of average attendance at prenatal visits (9 appointments versus 6, P<0.001). Although there was no statistical significance, the data showed that there was a higher average birth weight (3142g versus 3095g, P=0.26) and fewer preterm births (7% versus 9%, P=0.28). This research was significant because it highlighted a vulnerable population and one that was racially, ethnically, and economically diverse, perhaps providing a realistic view on the most impactful uses of trauma-informed care framework to address the rising morbidity and mortality in perinatal care in the United States.

Limitations from Racine et al.'s (2021) study include that there was only a 5% referral rate to mental health services, possibly linked to the availability of mental health services and coverage in that region, as well as the absence of positive maternal outcomes found in this study. It raised questions regarding the adequacy of trauma-informed training and follow-through. Additionally, the researchers noted how many adverse events occurred but did not specify the adverse health outcomes. The authors listed the nine types of events that predominated both cohorts: bleeding, hypertension, gestational diabetes, anemia, polyhydramnios, oligohydramnios, placenta previa, tobacco use, substance use, and alcohol use. Neither study deployed systems to check the standardization of trauma-informed care provided by staff after trainings (Ashby et al., 2019; Racine et al., 2021). Furthermore, the nature of retrospective cohort studies is such that they only highlight correlations and cannot determine causation between implementation of trauma-informed framework and maternal or neonatal outcomes.

Several additional studies examined the trauma-informed framework from a systems perspective rather than individual clinical practice interventions, which added to the extant literature to provide overarching theoretical support for adaptation of the framework. A quantitative cohort study (n=414) determined that the essential components of trauma-informed care within a health system included required training for all staff (3.74 on a five-point Likert scale with 0.66 standard deviation), positive and safe physical environment (3.72, 0.59 SD), policies and practices to reduce the risk of retraumatization

(3.57, 0.68 SD), and use of standardized trauma screening measures (3.36, 0.94 SD) (Hanson & Lang, 2016). A qualitative study surveyed providers (n=28) to understand primary care experiences of women with trauma histories, and expanded upon the National Center for Trauma-Informed Care (NCTIC) principles for providing trauma-informed care to include actively bearing witness to and validating experiences of trauma, helping the patient feel that they were in a safe space in the clinic and recognition of the need for physical and emotional safety, including the patient in the healing process, believing in the patient's strengths and resilience, and incorporating processes that were sensitive to patients' cultures, ethnicities, personal, and social identities (Purkey et al., 2018).

A systematic review examining training protocols for trauma-informed care noted that there was more uptake of trauma-informed principles when there was common language available to discuss trauma-informed care, when providers could realize the positive impacts on patients, and when providers could see positive changes in emotional and behavioral regulation (Jackson & Jewell, 2021). Jackson and Jewell (2021) found that with studies that instituted short-increment training sessions, providers reported increased confidence in discussing trauma-informed care and increased capacity to create a supportive clinical environment. However, a significant limitation was that studies in the systematic review were not generalizable and that birth outcomes were not measured in many studies, so correlations were unable to be determined. Another systematic review examined trauma-informed frameworks for mental healthcare systems and noted the lack of diversity within the studies, which were of mainly white and European populations (Champine et al., 2019). The authors noted the need for more empirical data as well as the need to investigate multilevel impacts and protective factors for health outcomes (Champine et al., 2019). One small qualitative study (n=13) addressed queer birthing women and examined structural marginalization within prenatal care relationships (Searle et al., 2017). The authors found that queer women thought that validating their queer identity and experiences was important and similarly felt that the lack of consistency with providers correlated with a lack of certainty

around safety (Searle et al., 2017). Another qualitative review found similar results regarding patients' desire for perinatal provider consistency; the research team found that patients (n=30) cited strong relationships with their providers were necessary before disclosure of trauma (Gokhale et al., 2020). Only 47% of patients wanted specific, routine screening for trauma, while many believed that screening would be retraumatizing or that previous trauma was unrelated to the current pregnancy (Gokhale et al., 2020). The small sample sizes, lack of empirical data, and self-selecting design of these studies were limiting factors and speak to the need for larger, rigorous future studies that can focus on the implementation process as well as long term implications including childhood development milestones.

Group Prenatal Care and Birth Plans

Two studies were isolated from the body of literature combining birth plans and group prenatal care. Although neither were of high quality, there were trends that supported the use of combined birth planning and group classes for improved birth experiences. A qualitative Delphi prospective cohort study from Iran aimed to assess expert opinion of providers (n=13) regarding best practice strategies to prevent psychological birth trauma, which was higher in Iran than global averages (55% versus 34%) (Taghizadeh et al., 2019). The results of the Delphi analysis determined that the four best strategies to minimize psychological trauma included: continuous support during childbirth, practical childbirth preparation classes, group prenatal care, and preparing individual birth plans prenatally with providers, and these should be combined in integrated healthcare delivery to improve the overall quality of obstetric services (Taghizadeh et al., 2019). The research team noted that Iranian women faced strict regulation regarding accessibility of attending childbirth classes or group care due to societal standards, which limited the generalizability in other contexts, and pointed towards staffing shortages to explain obstacles in improving care delivery. Another qualitative study (n=25) from Iran found an association between implementation of a birth plan in addition to childbirth education classes that resulted in an increased likelihood of achieving a vaginal birth. However, the authors did not note the extent that the

birth plan and classes might be protective. Another finding was that offering empowerment increased maternal satisfaction during the childbirth process due to the enhanced communication facilitation and relationship building with providers (Mohaghegh et al., 2022). This study only included vaginal deliveries, 66% of which were by primiparous women. With the strict inclusion criteria in combination with the small sample size, there were areas for further research between outcomes and usage of birth plans between primiparous and multiparous women. Mohaghegh et al. (2022) also noted that successful overlap of a birth plan and group care was only possible with a supportive environment, specific goals, and focused planning.

Overall, the literature search revealed mixed-quality evidence; however, there were trends to suggest that birth plans improve neonatal outcomes and reduce the risk of neonatal acidosis, reduce the likelihood of cesarean delivery, and may have a positive impact on birthing people's perceptions of their experience when they were used to foster supportive, trusting relationships with their providers in conjunction with shared decision-making efforts. Birth plans based on continuous partnerships between patients and providers may reduce medical intervention, improve outcomes for birthing people and neonates, and optimize the birth experience. Perinatal use of trauma-informed approaches may also have positive impacts on neonatal outcomes as well as improve communication and relations between patients and providers in vulnerable and healthy populations. The combined use of birth plans within a group prenatal care setting may also be protective in mitigating adverse health outcomes such as cesarean deliveries. Enhanced communication and information-sharing between patients and providers is an important area of research for addressing maternal and neonatal morbidity and birth outcomes. A birth plan crafted from a trauma-informed framework may be a useful tool for birthing families and providers alike.

Rationale

The theoretical framework of this project was based on the guidelines published by the 2014 NCTIC branch of SAMHSA. The NCTIC designated four major tenants of trauma-informed care for systems-level processing: (1) realizing the impact of trauma, (2) recognizing signs and symptoms of trauma in patients, families, and staff, (3) responding to trauma or disclosures by integrating knowledge about trauma into policies and procedures, and (4) actively resisting retraumatization of patients (SAMHSA, 2014). Their trauma-informed approach was based on the following six key principles: safety, trustworthiness and transparency, peer support, collaboration, empowerment and choice, and historical contexts (SAMHSA, 2014). These guidelines sought to shift the paradigm of healthcare providers asking their patients what is wrong with them to instead seeking to understand the story of what happened to them. The generic framework provided standardization of principles of trauma-informed care and ways to conceptualize, interact with, and respond to trauma in various manifestations in healthcare settings.

The NCTIC framework did not specifically denote perinatal care practices, but in overlaying their recommendations, trauma-informed care approaches should span from preconception to postpartum and pediatric settings. Using this framework, perinatal providers should be able to place referrals to perinatal mood specialists and mental health practitioners, and should train in appropriate screening methods for trauma, PTSD, and techniques like motivational interviewing and grounding techniques (Mosley & Lanning, 2020; Sperlich et al., 2017). Addressing a gap in the current literature, the creation of a birth plan using a trauma-informed approach was a novel tactic to address rising rates of peripartum morbidity and mortality, reports of obstetric violence, and satisfaction with the birth experience (Martínez-Galiano et al., 2021). The NCTIC framework influenced section elements of the birth plan (refer to Appendix B). The midwifery service at an academic healthcare center in the Pacific Northwest may benefit from initiating a trauma-informed birth plan during their group prenatal care sessions to

enhance communication and to encourage autonomy and information-sharing between patients and providers which could positively impact maternal and neonatal birth outcomes and experiences.

The quality improvement interventions for this project were guided by the Model for Improvement framework which was cultivated by the Institute for Healthcare Improvement (IHI). The Model for Improvement was developed as a guide to help healthcare processes and outcomes induce positive change through setting aims and measures in order to identify vectors for improvement (IHI, 2017). Once an intervention is identified with the Model, it is tested within the work setting using a Plan-Do-Study-Act (PDSA) cycle, with revisions for improvement in each iteration. PDSA cycles were a quick, efficient way to implement effective changes after observing results and acting on the information gathered during the cycles (IHI, 2017). Although usually adaptable to various settings, these cycles were often solution-oriented to one specific healthcare setting. This project sought quick iterations of the PDSA cycles to quickly evaluate for improvement within the midwifery practice related to implementation of the birth plan during each cycle of prenatal individual and group care.

Specific Aims

The overarching goal of this project was to create a tool that will help midwifery providers perform trauma-informed care in preparation for birth by enhancing communication between patients and providers regarding patient plans for their births. Specifically, this project devised a two-page birth plan using the NCTIC trauma-informed framework that the midwives and student midwives deployed to pregnant patients antenatally during group prenatal care visits. The four specific aims are as follows: 1) 100% of the clinically practicing midwives and student midwives will receive access to training via a voiceover slide set on the efficacy of birth plans and trauma-informed approaches to care by August 30, 2023. 2) 80% of the midwives and student midwives will complete a post-training survey on birth plans and trauma-informed care by Sept 5, 2023. 3) 100% of the midwives and student midwives responsible for leading group prenatal care sessions during the project timeframe will offer each patient in the group

prenatal care visit use of the birth plan by the end of each of the three PDSA cycles. This aim will be measured by the completion of a dotphrase, which is a preformed standardized block of text that is inserted into the electronic medical record, to indicate whether the patient was offered the birth plan and whether the patient chose to use the birth plan. 4) 80% of the clinically practicing midwives and student midwives will provide feedback on the project after offering the birth plan in group prenatal care visits by Dec 5, 2023. This final survey will obtain comments from participating midwives and students on their perceptions of the impact of the birth plan on the antenatal, intrapartum, and postpartum care of the receiving patients.

Context

The midwifery group in an academic healthcare center in the Pacific Northwest practiced independently and cared for low- and moderate-risk patients throughout their pregnancy as well as gynecologic care. There were 22 midwives who work in the ambulatory setting. The majority of the several hundred patients in the midwifery population were between the ages of 17 and 35, with 15% over the age of 35. Seventy-nine percent identified as non-Hispanic and 14% identify as Hispanic. In the clinic, 87% of patients had commercial insurance and 13% had state or federally funded insurance. The midwives offered supplementary prenatal care facilitated through regular group prenatal care sessions, for which patients voluntarily enrolled. There were 13 groups throughout the year organized by similar due date and patients participated for seven sessions beginning at 20-24 weeks of gestation until weekly individual care visits resumed at 36 weeks of gestation. Many pregnant patients brought in birth plans of their own creation for use in labor, but often these birth plans contained requests for what was already the standard of care. Thus, the midwives found it challenging to determine specific values and support patients in their individualized needs and sought a useful tool to assist them in caring for their patients. This midwifery practice was owned by the university's school of nursing. Student nurse-midwives were supervised by faculty midwives in this practice and cofacilitated group prenatal care.

Interventions

The general steps of this project started with the development of a birth plan within the NCTIC framework for trauma-informed care and utilized the Plain Language Checklist for Health Care Professionals (Ontario, 2023). The midwives in the project advising committee reviewed and offered feedback for the birth plan by July 31, 2023. The edits and feedback were incorporated into the birth plan. A presentation of the birth plan and impacts of birth plans and trauma-informed care took place via a voiceover slide set to the midwives and student midwives who led three specific group prenatal care cohorts (available in Appendices E and F). Assessment of the education took the form of a short survey of the midwives after they viewed the slide set (available in Appendix C). Following this education, the first PDSA cycle focused on distribution of the birth plan to the first prenatal care cohort, which held their sixth meeting on September 6, 2023, and anticipated due dates of late September to mid-October. The first cohort (E6) had four eligible participants, the second cohort (F6) had five, and the third (G6) had four. Each PDSA cycle lasted approximately one month, the second PDSA cycle began on October 2, 2023, and the third PDSA cycle on November 7, 2023. An email reminder was sent to the midwives and student midwives the day before their group prenatal session in which they offered the birth plan to patients. The patient's use of the birth plan was optional, but all patients enrolled in group prenatal care had the dotphrase entered into the problem list of their electronic medical record. A dotphrase with an embedded checklist was created to document the presentation of the birth plan to the patient along with requested follow-up within two to four weeks at one of the following two prenatal care visits (available in Appendix D). If the patient chose to use the birth plan, a targeted email reminded the midwife to upload the patient's completed plan to the Media section of the electronic medical record and to document whether the birth plan was reviewed upon admission to the labor unit for intrapartum care. The clinically practicing midwives and student midwives in the antepartum and intrapartum settings examined the birth plan and provided feedback on the birth plan, which was then

edited accordingly to prepare for the next PDSA cycle. The next group prenatal cohort received the introduction to the birth plan during their September visits, and feedback was once again requested from the midwives and student midwives. The final PDSA cycle focused on distribution and feedback from the third group prenatal cohort in October, and by November 15 a final version of the birth plan was determined. At the close of this project, the midwives and student midwives were surveyed regarding their comments and observations of patients who utilized the birth plan during requisite antenatal and intrapartum care, including if the midwife perceived whether the patient completed the birth plan correctly, addressed any residual questions, or received any spontaneous feedback from the patient to enhance discussion of pregnancy care (available in Appendix H). Final analysis occurred in January 2024.

Study of the Interventions

Assessment of the birth plan interventions for the midwifery practice was completed using the Standards for Quality Improvement Reporting Excellence (SQUIRE) 2.0 guidelines. The SQUIRE 2.0 framework supports quality improvement projects by providing a systematic framework to implement and evaluate change within healthcare systems with a focus on safety and value (Ogrinc et al., 2016). To measure the midwives and student midwives' perceptions of the trauma-informed birth plan during group prenatal care sessions, a survey was conducted at the beginning of the education with the voiceover slide set. At the end of the PDSA cycles, approximately four months later, another survey was conducted to measure midwives' insights regarding the birth plan's impact on patients during their prenatal and intrapartum care. Additionally, at the close of each PDSA cycle, chart reviews were performed on each participant in the group prenatal and individual care cohort to determine whether they utilized the birth plan during subsequent prenatal and intrapartum care. The values from the surveys and chart reviews were graphed for improved data visualization during the analysis period.

Measures

The IHI Quality Improvement framework delineated project measurement in a hierarchical manner with primary and secondary outcomes framed within the study context of balancing measures and process measures (IHI, 2017). The primary outcome of this project was understanding the perceptions of midwives and student midwives of the birth plan to enhance prenatal and intrapartum care. The secondary outcome was enhancing provider and patient communication during group care sessions as well as any subsequent visits and patient interactions, e.g., patient electronic health record messages. Process measures for this project were: 1) the percentage of completed dotphrases indicating whether patients utilized the birth plan during antenatal and intrapartum care, and 2) the percentage of midwives and student midwives who completed the survey after the voiceover slide set training, and 3) the Likert scale responses used to survey the midwives and student midwives. Balancing measures considered contextual elements of nulliparity, which were recorded from the group prenatal care participants, patient familiarity with hospital birth, patient interest levels in engagement with the project, and midwife practice workflow considering time management and interfacing with the medical record.

Analysis

Data were gathered for this project first with the survey in the form of the Likert scale that the midwives and student midwives completed before the initiation of the PDSA cycles. Once the PDSA cycles began, chart reviews were completed to gather information from the dotphrases at the expected delivery date and end of each of the three group prenatal cohorts. Another survey then compiled data from perceptions of the midwives and student midwives who interacted with group prenatal patients during antepartum, intrapartum, or postpartum care. Data charts were created during the analysis period from each survey.

Ethical Considerations

Ethical aspects of implementing and studying the intervention of the trauma-informed birth plan include determination of non-research design through the academic health center's institutional review board (IRB). As a quality improvement project, this was designed to address the perceptions of midwives on improving birth experiences in the specific, localized clinical setting rather than through a global systemic lens. Throughout the rollout of the birth plan, patient and midwife confidentiality was maintained and no identifying patient information was collected.

Results

In line with the specific aims of this quality improvement project, 27 of 27 (100%) faculty midwives and student midwives received an educational voiceover slide set module on concurrent clinical use of the birth plan and trauma-informed care practices for prenatal care. Only 12 of 27 (44%) midwives and student midwives responded to a five-point Likert scale-based survey after receiving the training (refer to Table C-1 and Graph C-2 in Appendix C for a depiction of the survey results). This post-educational survey obtained scaled scores of midwives' and student midwives' understanding and buy-in for the project. Of the respondents, nine of 12 (75%) rated their interest in incorporating the birth plan into their prenatal recommendations as very high, or 5 points, while the remaining three (25%) rated their interest as high. Twelve out of 12 (100%) respondents rated their confidence as high or very high for supporting their laboring patients who brought in the completed trauma-informed birth plan. Two of 12 (17%) respondents noted that they felt moderately equipped to discuss with patients the possible benefits to maternal and neonatal health outcomes with the use of a birth plan, while 83% rated their ability as high or very high.

Of the three group prenatal care cohorts that met during September 1, 2023, to December 15, 2023, 13 of 13 (100%) patients were offered use of the birth plan. Each of the three midwives and three student midwives (100%) overseeing the group prenatal care sessions were involved in provision of the

birth plan to these patients. In group E6, there were four patients and one of them (25%) utilized the trauma-informed birth plan. In group F6, there were five patients and two of them (40%) utilized the trauma-informed birth plan. In group G6, there were four patients and all four of them (100%) utilized the trauma-informed birth plan. From the patients participating in the three group prenatal care cohorts, the total birth plan uptake rate was six of 13 (46%) patients with significantly increasing buy-in over the project timeline (refer to Chart G-3 in Appendix G for progressive patient birth plan uptake).

The three PDSA cycles included modifications over the timeline of this project (refer to Table G-1 in Appendix G for outline of interventions). PDSA cycle one consisted of introducing the birth plan to the midwives and student midwives with the E6 group prenatal cohort at their penultimate session when most participants were approximately 36 gestational weeks. Hard copies of the birth plan were printed and given to cohort patients. There was follow up with the midwives and student midwives to enquire about patient interest and additional tools they might find helpful for the birth plan project implementation. Additionally, there was weekly review of the electronic medical record to ensure that the dotphrase was charted correctly to capture patient use of the birth plan.

With elicited feedback taken into consideration for the second PDSA cycle, a written information sheet with the key points of the trauma-informed birth plan was created and disseminated to the midwifery practice (see Appendix J). An additional survey was created to capture concerns, barriers, and perceived patient interest by the midwives and student midwives. Themes from this survey were coded and used in the final thematic coding of this project (available in Appendix I). To improve patient uptake of the birth plan, a digital editable version of the birth plan was created and emailed to the midwives and student midwives running group prenatal care (available in Appendix F). Documentation in the electronic medical record was continually reviewed and weekly reminders to use the dotphrase '.cnmbirthplanDNP' were sent to the midwives and students.

The third PDSA cycle focused on further increasing patient uptake of the birth plan as well as increasing midwifery awareness of the birth plan project. There was a significant workflow change as the birth plan offering was expanded to all midwifery prenatal patients. Weekly practice-wide emails were sent to the faculty to raise recognition of the birth plan. Weekly chart reviews were completed to determine eligible clinic participants and day-of-visit reminders were sent to midwives asking them to offer the birth plan during the clinic visit. The birth plan template was reformatted a second time so that it could be added to the after visit summary with a new dotphrase '.cnmbirthpreferencesheetDNP'. During the three PDSA cycles, the improvement groups targeted were the faculty midwives and student midwives, the project team, information technology (IT) consultants, and the midwifery practice manager.

Participation in the post-project survey to understand provider insights on utilization and workflow of the birth plan was completed by 12 of 27 (44%) midwives and midwifery students. The majority, eight out of 12 (67%), of the midwives and student midwives noted that their workflow included presenting a general overview of the birth plan when offering it to patients, and none (0%) went over each item with the patient. Out of 12, one (8%) midwife noted that she did not use the birth plan in her workflow, while six (50%) mentioned the birth plan during some of their prenatal care visits. Five of 12 (42%) also noted that they put the birth plan template in the patient after visit summary using the dotphrase.

The post-project survey assembled the impressions of the midwives and student midwives regarding the strengths and weaknesses of the birth plan project. Ten of 12 (83%) noted that the birth plan was easy to understand. Nine of 12 (75%) felt that it was useful to the patients, while only five of 12 (42%) noted that it was useful for the Group. It is important to note that due to the abbreviated nature of the project timeline, the faculty midwives might not have been able to experience the full effect of the birth plan on the practice. Eight of 12 (67%) remarked that the birth plan was an important aspect of

prenatal care; the same number felt that the strength of the birth plan was that is designated space to discuss trauma histories. In terms of disadvantages to using the birth plan in the practice, four of 12 (33%) midwives or student midwives noted that it was difficult to make the birth plan accessible to patients. Three of 12 (25%) noted that the documentation process, which was necessary for the purposes of tracking the project, was too complex and challenging. Two of 12 (17%) felt that the birth plan took too much time away from the clinic visit.

Addressing future interest in using the birth plan in the practice ten of 12 (83.3%) voted to continue using the birth plan, while one (8.3%) voted not to, and one (8.3%) was unsure (exhibited in Appendix H). Of those who voted yes to continue the birth plan, five of ten (50%) wanted no revisions; two of 10 (20%) wanted minor revisions; and three of ten (30%) used the space to type in their specific recommendations for continued use of the birth plan, including doula involvement and introduction through the electronic health record platform. Most midwives and student midwives agreed on the preferred time to present the birth plan to patients in the future, with ten of 12 (83%) designating the 32-week prenatal visit as the best time during the antenatal period.

Final survey analysis was coded for themes in qualitative responses from midwives and student midwives regarding implementation of the birth plan and contact with antenatal and intrapartum care. This was done by the principal investigator and with anonymous data recordings. Four overarching themes that emerged from the surveys (n=20) were as follows: (1) patients were perceived to be very receptive and engaged in framework, (2) midwives appreciated an internal, evidence-based tool and resource, (3) the birth plan provided a reason to open a trauma-based discussion, and (4) there was concern about disseminating the birth plan template via hard copy versus a digital version (refer to Appendix I, Chart I-1 for thematic information). Other notable comments included perceptions that the birth plan template was more relevant to primigravidas rather than multigravidas and that doulas should be engaged in discussion and processing of the birth plan.

Discussion

Summary

The goal of this quality improvement was to provide a tool for the midwifery faculty practice to support the provision of person-centered and trauma-informed care with the creation and implementation of a trauma-informed birth plan. Ultimately, this resulted in a final workflow of educating midwives on the intersection of birth plans, birth outcomes and trauma-informed care, and then these midwives and student midwives offering it to prenatal patients between 34 and 36 gestational weeks either in the clinic or at group prenatal care sessions. Midwives were then asked to document offering and completion of the birth plan in the Problem List section of the electronic medical record using the specific dotphrase and then upload the completed plan to the Media section of the chart after discussing it with the patient. Upon admission to labor and delivery, midwives were asked to check for scanned or hard copies of the plan in the patient chart.

The specific aims of the project were largely not met. Delivery of midwifery education was achieved at a rate of 100%, with the reception of the voiceover slide set by all 27 faculty and student midwives. Unfortunately, data were not captured regarding how many completed the training in full. The goal of 80% post-training survey completion was not met as only twelve of 27 (44%) midwives and student midwives completed it. This might have been due to the initial rollout of the birth plan in group prenatal care cohorts only, and the midwives who were not directly involved might not have been motivated to or understood that they should complete the survey. The third specific aim was partially met: specifically, for all six midwives and student midwives directly involved in group prenatal care, 100% provided the birth plan template to patients; however, during the third PDSA cycle when the scope of the project was widened to include all prenatal patients, the aim was completed at a rate of 56%, with 15 of 27 midwives and student midwives offering the birth plan to patients. The majority of the qualitative insights gained over the course of this project were from the fourth specific aim of the post-

project survey. This had a completion rate of 44%, with 12 of 27 completing the survey. It is worth acknowledging that the four specific aims were written only pertaining to group prenatal care cohorts. With only one PDSA cycle to evaluate the perceptions of all faculty midwives, data are limited, and trends may have been different if all the midwives had been involved in all three PDSA cycles.

Interpretation

The four themes that emerged from coding of the surveys indicated that the midwives perceived the birth plan to be of high value and interest to patients in their practice, with specific benefits of being evidence-based and providing a standardized space to discuss trauma and individualize care. It was also clear that the area of improvement to focus next efforts will be with the formatting of the birth plan to encompass a larger technological lens to be accessible and presentable across various technology platforms and medical record databases.

Much of the extant literature examined patient perceptions of and outcomes related to use of birth plans rather than midwifery perceptions, so this quality improvement project was difficult to compare to prior research. The limited scope of this project, with IRB approval designated for non-human subject research restricted the ability of the project to collect data on patient outcomes but it was able to establish a positive impression on use of a standardized trauma-informed birth plan within a faculty midwifery practice (see Appendix K for IRB information). In a cluster RCT (n=461) that looked at shared decision-making as an effective strategy in birth plan counseling concluded that discussion-based shared decision-making between midwives and patients was a more effective strategy in improving maternal and neonatal outcomes than presentation without discussion of the birth plan (López-Gimeno et al., 2022). There is also limited research on doulas and how they can facilitate optimization of birth plan provider-patient communication. The availability of group prenatal care cohorts to initially receive the birth plan was intentional and highlighted the important distinguishing elements noted in the Lopez-Gimeno study; group prenatal care facilitates a patient-centered atmosphere with bi-directional

information flow. The duration of group prenatal care visits is typically two hours in duration; individual clinic visits that usually last 20 minutes. Therefore, there is more time for discussion than in conventional antepartum care and this time increase is likely beneficial to facilitate autonomy and decision-making regarding wishes and expectations. Over the three PDSA cycles, patient uptake of the birth plan increased from 25% to 100% within the group prenatal care cohorts; however, patient outcomes were not tracked. For future research, one evidence-based tool that could be considered to track maternal perceptions and satisfaction with birth experiences is the Mackey Satisfaction with Childbirth Scale.

Optimal time for introduction of a birth plan varies across the literature but was often not mentioned. The timeline used in a Chinese RCT study (n=90) to identify measures to reduce rates of cesarean deliveries focused on creating a shared decision-making partnership between midwives and patients at 28 gestational weeks, making the birth plan at 33 gestational weeks, and performing modifications were 37 gestational weeks (Guo et al., 2023). A research team from Spain introduced their birth plan at 24 gestational weeks with a retrospective cross-sectional study (n=2,551) to establish prevalence of prenatal educational and birth plan development on obstetric and neonatal outcomes (López-Gimeno et al., 2018). The quality improvement project principal investigator polled the faculty midwives and student midwives to determine their preferred window to operationalize the trauma-informed birth plan. Regarding this practice's clinical workflow, 83% of midwives voted that the 32 gestational week visit would work best (see Chart H-2).

Next Steps

Suggestions for future workflow improvement focus on the technological side of the project. Namely, there should be a less complex, more intuitive documentation system where the midwife could quickly determine whether the patient chose to use the birth plan. One option includes documentation directly in the clinical visit progress note instead of inputting the dotphrase into the problem list, which seemed challenging from a project sustainability standpoint. From there, midwives could more easily

follow up with patients at successive visits to discuss concerns and care values and requests. The faculty practice group struggles to achieve consistency in adherence to general problem lists or checklists for communication of midwifery follow-up needs, which should be addressed for future workflow to be successful. Additionally, an autogenerated message through the patient messaging portal of the electronic medical record may be beneficial to complete the birth plan and reach out to care team with questions. One of the faculty midwives from the practice agreed to champion the workflow and revisions that will be needed for formal rollout of the birth plan into the practice. Other local midwifery practices affiliated with the academic midwifery faculty practice expressed interest in obtaining and customizing the birth plan for their practice sites.

Furthermore, upcoming projects could focus on working with information technology specialists from the electronic medical record corporation to create a version of the birth plan that can be filled out and shared online through the after-visit summary or the patient messaging portal. For the birth plan to be a sustainable and successful tool for patient care, it must be compatible with various medical records and android and non-android technology platforms.

In terms of bridging the gap between patient interest and completion of the birth plan, one idea for future workflow would be to incorporate medical assistants in the clinic to introduce and assess patient interest in discussing the birth plan option with a provider. However, for medical assistants to be part of the birth plan concept for this practice, they would require training and reinforcement; it may not be appropriate for medical assistants to partake in this level of clinical responsibility. Another idea would be to have laminated copies of the birth plan available in folders that could be added by the medical assistant to appropriate patient forms when applicable at the 32-week gestational visit. The outstanding request from the midwives during the rollout of the birth plan was a standardized implementation into the clinical visit cadence at the 32-week gestational visit. However, the 32-week gestational visit

timeframe might conflict with other interventions that the practice is considering implementing in the future.

Limitations

The biggest barrier to achieving a sustained positive impact for the midwifery faculty practice was to create a digital editable version of the birth plan template that could be accessed across servers and different technology platforms, including the electronic medical record. The project would have greatly benefitted from immediate collaboration with the IT team from the specific electronic medical record platform to get the birth plan to patients immediately and electronically. This would have allowed patients to go over the birth plan at their preferred pace and then contact the midwives with further questions and comments, thereby creating a dialogue that the literature has found may be protective for maternal and neonatal outcomes. An easily editable, electronic version of the birth plan template would have been the most useful version for the faculty practice to take away from this project. Through each PDSA cycle, attempts were made to produce an editable and widely accessible version, first with hard copies in cycle one, then in cycle two with an editable version available on Microsoft Word that the project team learned was not available through the electronic medical record or to those without Microsoft Word. In the third cycle, the midwifery practice manager was consulted, but was unable to facilitate an editable version to the patient messaging portal, so a new dotphrase was created to put a plain-text, non-editable version of the birth plan template into the after-visit summary. Midwives were well-versed in many areas and have numerous skillsets, however they were not often experts in information technology.

Even with weekly chart review and day-of reminders to midwives regarding offering and discussing the birth plan template, it is likely that there were times that were not documented when midwives offered the birth plan to patients, or patients chose to complete the template. Reasons for this possibility may include the multistep charting process in the electronic medical record, the PDSA cycle

changes to the workflow, confusion over accessibility of the template to patients, or limited time during clinic visits. It is feasible that the midwives who were motivated to integrate the birth plan template into their clinical workflow will do so, and those who were not interested will not. The predominant ambition of this project was to increase awareness among the midwifery faculty practice and explore an effective workflow for introduction of a low-cost, low-barrier evidence-based tool for midwives to offer patients during their prenatal care. Furthermore, the project surveys collected data anonymously, which was purposeful to encourage unbiased feedback, but made it impossible to follow up on comments and suggestions or encourage a greater response rate.

An external limit imposed on this project was the three-month timeframe due to the quarter-based course. Systems changes were challenging in most conditions, and such a short timeframe likely did not afford the faculty practice long enough to commit the birth plan template into their individual workflows.

Conclusion

A birth plan built from an established trauma-informed framework is a novel development within the extant literature on childbirth, making its contributive significance noteworthy for midwifery care and overall pregnancy and childbirth-related care. The majority of the midwives and student midwives reported that they would like to continue using the birth plan in the faculty practice. The focal themes from surveyed midwives highlighted the benefits of the birth plan project to include favorable patient response, the ability to present more evidence-based and program-endorsed tools, and a standardized space to discuss care options and trauma histories. With continuing program and technologic support, the birth plan can be fully integrated into the practice workflow as a sustainable tool for patients as they plan and consider their birth. In these key avenues, utilization of a trauma-informed birth plan may be a beneficial option to other midwifery and obstetric practices around the country.

Continued research on mitigating birth trauma and obstetric violence is necessary in reducing adverse maternal and neonatal perinatal outcomes. Specific to this project, the most important way to advance understanding of the impact of a trauma-informed birth plan on patient care would be to design research to assess the impact of the birth plan on maternal and neonatal outcomes. Future study in this area would likely utilize statistical analyses to exclude correlations and focus on causal relationships between use of the birth plan and positive or negative outcomes for patients. Gathering larger sample sizes is integral. It will be pertinent for future research to ask the question of what specifically participants found useful about the trauma-informed birth plan template and the trauma-informed approach in general. Longitudinal tracking of outcomes will likely prove beneficial. It also will be important to distinguish impact of the birth plan on specific outcomes, such as maternal psychological responses, method of delivery, induction rates, use of augmentation agents, and anesthetic and analgesic use in labor; and neonatal NICU admission rate, Apgar scores, and breastfeeding initiation and continuation.

Further Information

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References

ACNM. (2023). Index of ACNM documents and publications, January 2023. *Journal of Midwifery & Women's Health*, *68*(1), 146-149. https://doi.org/10.1111/jmwh.13476

Ades, V., Wu, S. X., Rabinowitz, E., Chemouni Bach, S., Goddard, B., Pearson Ayala, S., & Greene, J. (2019). An integrated, trauma-informed cwere model for female survivors of sexual violence: The engage, motivate, protect, organize, self-worth, educate, respect (EMPOWER) clinic. *Obstetrics and Gynecology*, *133*(4), 803-809. https://doi.org/10.1097/AOG.0000000000003186

Afshar, Y., Mei, J., Fahey, J., & Gregory, K. D. (2019). Birth plans and childbirth education: What were provider attitudes, beliefs, and practices? *The Journal of Perinatal Education*, *28*(1), 10-18. https://doi.org/10.1891/1058-1243.28.1.10

Afshar, Y., Mei, J. Y., Gregory, K. D., Kilpatrick, S. J., & Esakoff, T. F. (2018). Birth plans—Impact on mode of delivery, obstetrical interventions, and birth experience satisfaction: A prospective cohort study. *Obstetric Anesthesia Digest*, *38*(4), 217-218. https://doi.org/10.1097/01.aoa.0000547317.02096.73

Ahmadpour, P., Moosavi, S., Mohammad-Alizadeh-Charandabi, S., Jahanfar, S., & Mirghafourvand, M. (2022). Effect of implementing a birth plan on maternal and neonatal outcomes: A randomized controlled trial. *BMC Pregnancy and Childbirth*, *22*(1), 862-862. https://doi.org/10.1186/s12884-022-05199-5

Aragon, M., Chhoa, E., Dayan, R., Kluftinger, A., Lohn, Z., & Buhler, K. (2013). Perspectives of expectant women and health care providers on birth plans. *Journal of Obstetrics and Gynaecology of Canada*, *35*(11), 979-985.

Ashby, B. D., Ehmer, A. C., & Scott, S. M. (2019). Trauma-Informed care in a patient-centered medical home for adolescent mothers and their children. *Psychological Services*, *16*(1), 67-74. https://doi.org/10.1037/ser0000315

AWHONN. (2022). Respectful maternity care framework and evidence-based clnical practice guideline. *Nursing for Women's Health*, *26*(2), S1-S52. https://doi.org/10.1016/j.nwh.2022.01.001

Ayers, S., Wright, D. B., & Thornton, A. (2018). Development of a measure of postpartum PTSD: The City Birth Trauma Scale. *Frontiers in Psychiatry*, *9*(409), 1-8. https://doi.org/10.3389/fpsyt.2018.00409

Bell, C. H., Muggleton, S., & Davis, D. L. (2022). Birth plans: A systematic, integrative review into their purpose, process, and impact. *Midwifery*, *111*, 103388. https://doi.org/https://doi.org/10.1016/j.midw.2022.103388

Berg, M. M., Lundgren, I. I., & Lindmark, G. G. (2003). Childbirth experience in women at high risk: Is it improved by use of a birth plan? *The Journal of Perinatal Education*, *12*(2), 1-15. https://doi.org/10.1624/105812403X106784

Champine, R. B., Lang, J. M., Nelson, A. M., Hanson, R. F., & Tebes, J. K. (2019). Systems measures of a trauma-informed approach: A systematic review. *American Journal of Community Psychology*, *64*(3-4), 418-437. https://doi.org/10.1002/ajcp.12388

Divall, B., Spiby, H., Nolan, M., & Slade, P. (2017). Plans, preferences or going with the flow: An online exploration of women's views and experiences of birth plans. *Midwifery*, *54*, 29-34. https://doi.org/10.1016/j.midw.2017.07.020

Ghahremani, T., Bailey, K., Whittington, J., Phillips, A. M., Spracher, B. N., Thomas, S., & Magann, E. F. (2023). Birth plans: Definitions, content, effects, and best practices. *American Journal of Obstetrics & Gynecology*, S978-982.

Gokhale, P., Young, M. R., Williams, M. N., Reid, S. N., Tom, L. S., O'Brian, C. A., & Simon, M. A. (2020). Refining trauma-informed perinatal care for urban prenatal care patients with multiple lifetime traumatic exposures: A qualitative study. *Journal of Midwifery & Women's Health*, *65*(2), 224-230. https://doi.org/10.1111/jmwh.13063

Grant, R., Sueda, A., & Kaneshiro, B. (2010). Expert opinion vs. patient perception of obstetrical outcomes in laboring women with birth plans. *Journal of Reproductive Medicine*, *55*(1-2), 31-35.

Guo, H., Li, T., Zhou, R., Li, M., Feng, C., Cai, X., & Zhang, C. (2023). The application of a continuous partnership-based birth plan in China: A randomized controlled trial. *Midwifery*, *120*, 103625. https://doi.org/10.1016/j.midw.2023.103625

Hanson, R. F., & Lang, J. M. (2016). A critical look at trauma-informed care among agencies and systems serving maltreated youth and their families. *Child Maltreatment*, *21*(2), 95-100. https://doi.org/10.1177/1077559516635274

Hidalgo-Lopezosa, P., Cubero-Luna, A. M., Jiménez-Ruz, A., Hidalgo-Maestre, M., Rodríguez-Borrego, M. A., & López-Soto, P. J. (2021). Association between birth plan use and maternal and neonatal outcomes in southern Spain: A case-control study. *International Journal of Environmental Research and Public Health*, *18*(2), 1-8. https://doi.org/10.3390/ijerph18020456

IHI. (2017). QI Essentials Toolkt. In *Institute for Healthcare Improvement*.

Jackson, M. L., & Jewell, V. D. (2021). Educational practices for providers of trauma-informed care: A scoping review. *Journal of Pediatric Nursing*, *60*, 130-138. https://doi.org/10.1016/j.pedn.2021.04.029

Kaufman, T. (2007). Evolution of the Birth Plan. *The Journal of Perinatal Education*, *16*(3), 47-52. https://doi.org/10.1624/105812407X217985

López-Gimeno, E., Falguera-Puig, G., Montero-Pons, L., García-Martín, I. M., Borràs-Reverter, A., & Seguranyes, G. (2018). Actividad educativa sobre el plan de nacimiento en el control prenatal: Factores relacionados. *Matronas profesión*, *19*(4), 117-124.

López-Gimeno, E., Seguranyes, G., Vicente-Hernández, M., Burgos Cubero, L., Vázquez Garreta, G., & Falguera-Puig, G. (2022). Effectiveness of birth plan counselling based on shared decision-

making: A cluster randomized controlled trial (APLANT). *PLoS ONE*, *17*(9), e0274240-e0274240. https://doi.org/10.1371/journal.pone.0274240

Martínez-Galiano, J. M., Martinez-Vazquez, S., Rodríguez-Almagro, J., & Hernández-Martinez, A. (2021). The magnitude of the problem of obstetric violence and its associated factors: A cross-sectional study. *Women and birth: Journal of the Australian College of Midwives*, *34*(5), e526-e536. https://doi.org/10.1016/j.wombi.2020.10.002

McGlothen-Bell, K., Burnette, S., & Davis, N. K. (2022). Respectful maternity care framework and evidence-based clinical practice guideline. *Nursing for Women's Health*, *26*(2), S1-S52. https://doi.org/10.1016/j.nwh.2022.01.001

Mei, J. Y., Afshar, Y., Gregory, K. D., Kilpatrick, S. J., & Esakoff, T. F. (2016). Birth plans: What matters for birth experience satisfaction. *Birth*, *43*(2), 144-150. https://doi.org/10.1111/birt.12226

Mohaghegh, Z., Javadnoori, M., Najafian, M., Montazeri, S., Abedi, P., Leyli, E. K., & Bakhtiari, S. (2022). Implementation of birth plans integrated into childbirth preparation classes for vaginal birth: A qualitative study of women, their husbands and clinicians' perspectives in Iran. *BMC Pregnancy & Childbirth*, 1-13. https://doi.org/10.1186/s12884-022-05305-7

Mosley, E. A., & Lanning, R. K. (2020). Evidence and guidelines for trauma-informed doula care. *Midwifery*, *83*, 1-8. https://doi.org/10.1016/j.midw.2020.102643

Ogrinc, G., Davies, L., Goodman, D., Batalden, P., Davidoff, F., & Stevens, D. (2016). SQUIRE 2.0 (Standards for QUality Improvement Reporting Excellence): Revised publication guidelines from a detailed consensus process. *British Medical Journal of Quality and Safety*, *25*, 986-992. https://doi.org/10.1136/bmjqs-2015-004480

Ontario, H. Q. (2023). A plain language checklist for health care professionals. *Communicating Clearly with Patient and Caregiver Advisors*, 1-2.

Pinheiro, A., & Sardo, D. (2019). The birth plan as an instrument of health literacy. *European Journal of Public Health*, *29*. https://doi.org/10.1093/eurpub/ckz095.007

Purkey, E., Patel, R., Beckett, T., & Mathieu, F. (2018). Primary care experiences of women with a history of childhood trauma and chronic disease: Trauma-informed cwere approach. *Canadian Family Physician*, *64*(3), 204-211.

Racine, N., Ereyi-Osas, W., Killam, T., McDonald, S., & Madigan, S. (2021). Maternal-Child health outcomes from pre- to post-implementation of a Trauma-Informed Care Initiative in the prenatal care setting: A retrospective study. *Children*, *8*(11), 1-13. https://doi.org/10.3390/children8111061

SAMHSA. (2014). SAMHSA's concept of trauma and guidance for a trauma-informed approach. *HHS Publication*, *14-4884*.

Sato, S., & Umeno, Y. (2011). The relationship between the recognition of postpartum mothers' birth plan and the degree of satisfaction with delivery. *Journal of Japan Academy of Midwifery*, *25*(1), 27-35. https://doi.org/10.3418/jjam.25.27

Searle, J., Goldberg, L., Aston, M., & Burrow, S. (2017). Accessing new understandings of trauma-informed care with queer birthing women in a rural context. *Journal of Clinical Nursing*, *26*(21-22), 3576-3587. https://doi.org/10.1111/jocn.13727

Simpkin, P. (2007). Birth plans: After 25 years, women still want to be heard. *Birth*, *34*(1), 49-52.

Simpkin, P., & Reinke, C. (1980). *Planning your baby's birth*. International Childbirth Education Association.

Sperlich, M., Seng, J. S., Li, Y., Taylor, J., & Bradbury-Jones, C. (2017). Integrating trauma-informed cwere into maternity care practice: Conceptual and practical issues. *Journal of Midwifery and Women's Health*, *62*, 661-672. https://doi.org/10.1111/jmwh.12674

Taghizadeh, Z., Taheri, M., Takian, A., & Jafari, N. (2019). Maternity care priorities for prevention of psychological birth trauma in Iran: A Delphi consensus study. *Nursing Practice Today*, *6*(1), 26-33.

Appendix A

A-1: Australian Birth Plan, What to Take to Hospital list.

What to take to hospital

If you are having your baby in a hospital or birthing centre, use this handy checklist to make sure you have everything you might need.

Paperwork

- ☐ Medicare card
- ☐ Hospital paperwork
- ☐ Antenatal card
- ☐ Birth plan (if you have one)
- ☐ Insurance details (if you have it)

General

- ☐ Music
- ☐ Camera
- ☐ Phone
- ☐ iPad/tablet
- ☐ Chargers
- ☐ Books and magazines
- ☐ Snacks and drinks
- ☐ Cash
- ☐ Headphones
- ☐ Eye mask and ear plugs

Mum

- ☐ Going home clothes
- ☐ Old t-shirt for labour
- ☐ Loose, comfortable clothing
- ☐ Supportive bras (maternity bra)
- ☐ Slippers
- ☐ Thongs
- ☐ Socks
- ☐ Sleepwear
- ☐ Dressing gown
- ☐ Warm jumper or cardigan
- ☐ Cheap or disposable underwear
- ☐ Maternity sanitary pads
- ☐ Button-up shirt for breastfeeding
- ☐ Breastfeeding pads
- ☐ Hairband and hairbrush
- ☐ Massage cream or oil
- ☐ Lip balm
- ☐ Makeup (if you wish)
- ☐ Shower essentials
- ☐ Toothbrush and toothpaste
- ☐ Glasses or contact lenses

Partner

- ☐ Change of clothes
- ☐ Swimwear
- ☐ Toiletries
- ☐ Pillow

Baby

- ☐ Nappies (8-10 per day)
- ☐ Baby blanket
- ☐ Baby wipes
- ☐ Baby clothes
- ☐ Onesie
- ☐ Hat
- ☐ Booties or socks

Things to remember

- Check with the hospital or birthing centre what you need to bring.
- Find out about visitors' waiting hours and waiting rooms.
- Make sure the car seat is properly fitted.
- If you have other children, have a plan for who will be looking after them and when they will come to visit.
- If you have pets, make sure you have someone on standby to look after them.

pregnancybirth&baby

www.pregnancybirthbaby.org.au

1800 882 436

A-2: National Health Service Birth Plan template

NHS

My birth plan

My name:

Due date:

Where to give birth

You will have a choice about where to have your baby. Your midwife or doctor will be able to tell you what services are available locally and advise you on any issues to do with your health or pregnancy that may affect your choice.

☐ I would like to give birth at home

☐ I would like to give birth in a midwifery unit

☐ I would like to give birth in a maternity team unit in hospital

☐ I am not sure yet where I would like to give birth

My comments on where I would like to give birth and why:

Companions

Having a companion you can 'lean on' and who can support you during your labour can be helpful. It has been shown to reduce the need for pain relief.

☐ I would like my partner or companion(s) to be with me during labour

☐ I would not like my partner or companion(s) to be with me during labour

☐ I am not sure yet whether I would like my partner or companion(s) to be with me

NHS

My birth plan

My birth partner or companion is:

Companions during a forceps or vacuum delivery

A forceps delivery is where forceps are placed around the baby's head to pull him or her gently from the birth canal. Vacuum delivery, sometimes called ventouse, is when the baby is guided out using a cap fitted to its head by suction.

☐ I would like my partner or companion(s) to be with me if I have a forceps or vacuum delivery

☐ I would not like my partner or companion(s) to be with me if I have a forceps or vacuum delivery

☐ I do not mind if my partner or companion(s) is with me if I have a forceps or vacuum delivery

☐ I am not sure yet whether I would like my partner or companion(s) to be with me if I have a forceps or vacuum delivery

Companions during a caesarean section

A caesarean section is when the baby is delivered by cutting through the abdomen and into the womb. This will only be performed when it is necessary, but there are situations where this is the safest option for either you or your baby. If your caesarean section is carried out under local anaesthetic and you are awake, your partner or companion may sit with you.

☐ I would like my partner or companion to be with me if I have a caesarean section

☐ I would not like my partner or companion to be with me if I have a caesarean section

☐ I do not mind if my partner or companion is with me if I have a caesarean section

☐ I am not sure yet if I would like my partner or companion to be with me if I have a caesarean section

NHS

My birth plan

Birthing equipment

You may find that items such as wall bars, mats or beanbags help you to change position and remain comfortable during labour. If you're giving birth in a maternity unit, your midwife will be able to tell you if specific items are normally available. However, you may need or prefer to provide some equipment yourself.

☐ I plan to use equipment such as mats or beanbags during labour

☐ I do not plan to use equipment such as mats or beanbags during labour

☐ I am not sure yet whether I would like to use equipment such as mats or beanbags during labour

My comments on birthing equipment and whether I will provide it:

Special facilities

Some units may offer you special facilities such as a birthing pool. Some have special rooms called LDRP rooms (labour, delivery, recovery, postnatal rooms) where you stay in the same room until you leave the hospital, although availability is limited. Your midwife will be able to tell you what's available.

☐ I would like to use a special LDRP room, if available

☐ I would like to use a birthing pool, if available

☐ I would like to use other special facilities

☐ I am not sure yet whether I would like to use special facilities, such as a special LDRP room or birthing pool, if available

My comments on any special facilities I would like to use:

NHS

My birth plan

Any other comments or preferences on birth location, facilities or companions:

Monitoring during labour

Every baby is monitored throughout labour to make sure that it is not in distress. There are different ways of monitoring the baby's heartbeat.

☐ I have discussed with my midwife how I would like my baby's heart to be monitored if everything is straightforward

☐ I have not discussed with my midwife how I would like my baby's heart to be monitored if everything is straightforward

My comments on monitoring my baby during labour:

NHS

My birth plan

Keeping active during labour

Keep active for as long as you feel comfortable. This helps the progress of the birth. Keeping active doesn't mean doing anything strenuous, just moving around normally.

☐ I would like to move around during labour

☐ I would not like to move around during labour

☐ I do not mind whether or not I move around during labour

☐ I am not sure yet whether I would like to move around during labour

My comments on moving around during labour:

Positions for labour and birth

Find the positions you prefer and which will make labour easier for you. Try out various positions at antenatal class or at home to find out which are the most comfortable for you. You can choose as many positions as you want and vary them throughout your labour.

☐ I would like to be in bed with my back propped up by pillows

☐ I would like to be standing

☐ I would like to be sitting

☐ I would like to be kneeling

☐ I would like to be kneeling on all fours

☐ I would like to be squatting

☐ I would like to be lying on my side

☐ I am not sure yet which positions I would like to be in during labour

NHS

My birth plan

Skin-to-skin contact with your baby

After the birth you can have your baby lifted straight onto you before the cord is cut so that you can be close to each other immediately. If you prefer, you can ask the midwife to wipe your baby and wrap him or her in a blanket first.

☐ I would like my baby delivered straight onto my tummy

☐ I would like my baby cleaned first before being given to me

☐ I do not mind if my baby is cleaned before being given to me

☐ I am not sure yet whether I would like my baby delivered straight onto my tummy

My comments on anything special I would like to happen immediately after the birth:

Midwives, nurses and doctors in training

Midwives, nurses and doctors need to observe women in labour as part of their training. They will always be supervised by a senior health professional.

☐ I have discussed with my midwife my thoughts about having midwives, nurses or doctors in training with me during labour

☐ I have not discussed with my midwife my thoughts about having midwives, nurses or doctors in training with me during labour

Other comments or preferences about my labour and birth:

NHS

My birth plan

Pain relief options

There are many different pain relief options. Some women use a combination of methods. You may find that you want more pain relief than you had planned, or that more effective pain relief may be advised to assist with delivery. You can use a number of different methods at different times.

☐ I would like to try breathing and relaxation

☐ I would like to try being in water during labour and/or birth

☐ I would like to try massage

☐ I would like to try acupuncture

☐ I would like to try TENS (transcutaneous electrical nerve stimulation)

☐ I would like to try gas and air (entonox)

☐ I would like to try pain-relieving injections

☐ I would like to try an epidural

☐ I would like to try other methods of pain relief

☐ I would like to try to manage without pain relief

My preferences for pain relief:

NHS

My birth plan

Having an episiotomy

An episiotomy is a cut in the perineum (the area between the vagina and anus). This may be necessary if the perineum won't stretch enough and may tear, or if the baby is short of oxygen and needs to be delivered quickly.

☐ I have discussed with my midwife or doctor why an episiotomy might be necessary

☐ I have not discussed with my midwife or doctor why an episiotomy might be necessary

My feelings about the possible need for an episiotomy:

Delivering the placenta after the birth

After your baby is born your midwife will offer you an injection in your thigh. This contains the drug syntometrine or syntocinon which helps the womb contract and can prevent the heavy bleeding that some women may experience without it.

☐ I have discussed with my midwife what happens after labour when the placenta is delivered

☐ I have not discussed with my midwife what happens after labour when the placenta is delivered

NHS

My birth plan

My preferences about delivering the placenta:

Feeding your baby

Breast milk is the best form of nutrition for babies as it provides all the nutrients a baby needs and has lasting benefits for the health of your child. Infant formula milk can be used as an alternative to breast milk.

☐ I would like to breastfeed my baby

☐ I would like to bottle feed my baby

☐ I would like to try a mixture of breastfeeding and bottle feeding

☐ I am not sure yet how I would like to feed my baby

My comments about feeding my baby:

Vitamin K for your baby

Vitamin K is needed to make the blood clot properly. Some newborn babies have too little vitamin K so it may be suggested that your baby be given vitamin K either by injection or by mouth.

☐ I have given my midwife my consent to give my baby vitamin K

☐ I have not given my midwife my consent to give my baby vitamin K

NHS

My birth plan

Any other comments or preferences about me and my baby immediately after the birth:

Special requirements

Please tick any that apply to you. You can fill in more details in the box below.

☐ English is not my first language, and I need someone present who speaks my first language

☐ I need a sign language interpreter

☐ I have special dietary requirements

☐ I and/or my partner have special needs

☐ I would like certain religious customs to be observed

More information about my special requirements:

NHS

My birth plan

Any other comments or preferences about me and my baby immediately after the birth:

Special requirements

Please tick any that apply to you. You can fill in more details in the box below.

☐ English is not my first language, and I need someone present who speaks my first language

☐ I need a sign language interpreter

☐ I have special dietary requirements

☐ I and/or my partner have special needs

☐ I would like certain religious customs to be observed

More information about my special requirements:

NHS

My birth plan

General comments:

A-3: ACOG Sample Birth Plan

Sample
Birth Plan

ACOG
The American College of Obstetricians and Gynecologists

A birth plan is a written outline of what you would like to happen during labor and delivery. This plan lets your obstetrician–gynecologist (ob-gyn) know your wishes for your labor and delivery.

Go over your plan with your ob-gyn well before your due date. But keep in mind that having a birth plan does not guarantee that your labor and delivery will go according to that plan. Unexpected things can happen.

Remember that you and your ob-gyn have a common goal: the safest possible delivery for you and your baby. A birth plan is a great starting point, but you should be prepared for changes as the situation dictates.

Birth Plan

Your name: _____
Name of your ob-gyn: _____
Name of your baby's doctor: _____
Type of childbirth preparation: _____

Labor (choose as many you wish)

❑ I would like to be able to move around as I wish during labor.
❑ I would like to be able to drink fluids during labor.

I prefer:
❑ An intravenous (IV) line for fluids and medications
❑ A heparin or saline lock (this device provides access to a vein but is not hooked up to a fluid bag)
❑ I don't have a preference

I would like the following people with me during labor (check hospital or birth center policy on the number of people who can be in the room):

❑ It's OK ❑ not OK for people in training (such as medical students or residents) to be present during labor and delivery.

I would like to try the following options if they are available (choose as many as you wish):
❑ A birthing ball
❑ A birthing stool
❑ A birthing chair
❑ A squat bar
❑ A warm shower or bath during labor. I understand that a bath would be used only for the first stage of labor, not during delivery.

Anesthesia Options (choose one):

❑ I do not want anesthesia offered to me during labor unless I specifically request it.
❑ I would like anesthesia. Please discuss the options with me.
❑ I do not know whether I want anesthesia. Please discuss the options with me.

Delivery

I would like the following people with me during delivery (check hospital or birth center policy):

❑ I prefer to avoid an episiotomy unless it is necessary.
❑ I have made prior arrangements for storing umbilical cord blood.

For a vaginal birth, I would like (choose as many as you wish):
❑ To use a mirror to see the baby's birth
❑ For my labor partner to help support me during the pushing stage
❑ For the room to be as quiet as possible
❑ For one of my support people to cut the umbilical cord
❑ For the lights to be dimmed
❑ To be able to have one of my support people take a video or pictures of the birth. (Note: Some hospitals have policies that prohibit videotaping or taking pictures. Also, if it is allowed, the photographer needs to be positioned in a way that does not interfere with medical care.)
❑ For my baby to be put directly onto my chest immediately after delivery
❑ To begin breastfeeding my baby as soon as possible after birth

In the event of a cesarean delivery, I would like the following person to be present with me:

❑ I would like to see my baby before my baby is given eye drops.
❑ I would like one of my support people to hold the baby after delivery if I am not able to.
❑ I would like one of my support people to go with my baby to the nursery.
❑ I would like my support person to know what shots my newborn will receive.

Baby Care Plan

Feeding the Baby
I would like to (check one):
❑ Breastfeed exclusively
❑ Bottle-feed
❑ Combine breastfeeding and bottle-feeding

It's OK to offer my baby (check as many as you wish):
❑ A pacifier ❑ Sugar water
❑ Formula ❑ None of the above

Nursery and Rooming-In
If available at my hospital or birth center, I would like my baby to stay (check one):
❑ In my room with me at all times
❑ In my room with me except when I am asleep
❑ In the nursery but be brought to me for feedings
❑ I don't know yet. I will decide after the birth.

Circumcision
❑ If my baby is a boy, I would like him circumcised at the hospital or birth center.

Appendix B

Table B-1) Trauma-Informed Framework within the Birth Plan

NCTIC Framework Components	Birth Plan Components
Realizing the widespread impact of trauma on an individual's functioning and well-being	• Box with "Coping Strategies" outlined, delineating pharmacological and non-pharmacological options. • Offer to name and discuss history of trauma and subsequent management plan: "Were there any traumatic or stressful experiences now or in your past that could affect your pregnancy or birthing experience? If so, do you have a plan to manage your history of trauma?" • Offer to name and discuss impact of trauma: "Sometimes labor and childbirth bring up uncomfortable sensations and powerful emotions, making it hard to cope. When faced with stressful things, I typically do things like: …"
Recognizing(Ayers et al., 2018) the signs and symptoms of trauma	• Offer to describe birth preferences with the following "things that make you feel safe, supported, and free to find comfort during your labor and birth." • Offer for individuals to designate their birth environment preferences including low lighting and low noise level. • Discuss communication preferences with information sharing and processing during labor and birth: "This is how I'd prefer to communicate during my labor: …" • Recognition of impact on concentration during labor: "It is helpful to stay mentally focused during labor. Have you had any troubling experiences in the past that might get in the way of your mental focus during labor? If so, what do you think will help you with staying focused?"
Responding to knowledge of trauma by changes in clinical practice and procedures	• Using the completed birth plan as a tool for communication about birth.
Resisting retraumatization with safety, transparency, collaboration, empowerment, and cultural awareness	• Description of birth plan as a "guide as you prepare for your birth." • Description of birth plan as a place to "define your values, priorities, and preferences as you explore your options." • Description of birth plan as "an opportunity to share your history on your own terms and address your unique needs." • Affirmation of "your midwives were here to support you in the way you wish to be supported."

	• Identification of self and birth support team: invitation to "include pronouns as desired." • Offer to describe birth preferences with the following "things that make you feel safe, supported, and free to find comfort during your labor and birth." • Offer for individuals to designate labor preferences of location, tools, and positioning. • Discuss management of trauma response: "To manage stress or trauma, these were the things that I would find helpful during labor and birth: …" and, "During labor, I would like my care team to know and do the following things to provide the best care for me: …" • Transparency: "Making decisions in labor can feel overwhelming. Here were some questions you can ask if this happens: 1) What were the benefits? 2) What were the risks? 3) Were there any alternatives? 4) What is my intuition telling me? 5) What happens if we do nothing?"

Appendix C

Post-Presentation Midwife Survey

Please rate your answers to the following questions, with 1 being **least** agreed with and 5 being **most** agreed with.

1. I feel equipped to discuss with patients the possible benefits to maternal and neonatal health outcomes with use of a birth plan, based on the existing evidence.

   (least) 1 2 3 4 5 (most)

2. I am interested in incorporating birth plans into my prenatal recommendations.

   (least) 1 2 3 4 5 (most)

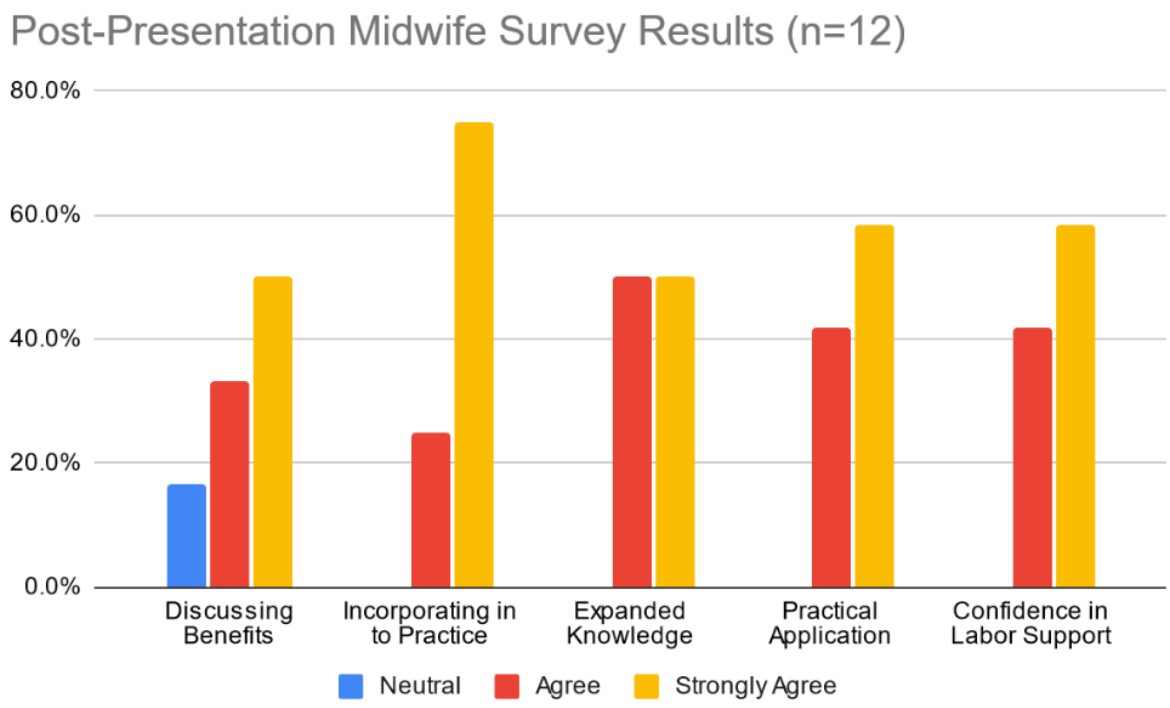
3. This presentation helped expand my existing knowledge of trauma-informed approaches to care.
   (least) 1 2 3 4 5 (most)
4. I can name at least one practical application of trauma-informed care that I will incorporate into my practice.
   (least) 1 2 3 4 5 (most)
5. I feel confident in my ability to support patients in labor who bring in a completed trauma-informed birth plan.
   (least) 1 2 3 4 5 (most)

Table C-1: Likert Scale Data Collection Table

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I feel equipped to discuss with patients the possible benefits to maternal and neonatal health outcomes with use of a birth plan, based on the existing evidence.	0	0	2	4	6
I am interested in incorporating birth plans into my prenatal recommendations.	0	0	0	3	9
This presentation helped expand my existing knowledge of trauma-informed approaches to care.	0	0	0	6	6
I can name at least one practical application of trauma-informed care that I will incorporate into my practice.	0	0	0	5	7

I feel confident in my ability to support patients in labor who bring in a completed trauma-informed birth plan.	0	0	0	5	7

Graph C-2: Post Presentation Data Visualization



Appendix D

Initial Dotphrase

.CNMBIRTHPLANDNP

Antepartum:

[ ] Birth plan was given out.

[ ] Patient completed birth plan.

[ ] Birth plan was reviewed and discussed with CNM.

[ ] Birth plan was sent for scanning to be placed in Media.

Intrapartum:

[ ] Birth plan print out was given to primary nurse on admission.

[ ] Birth plan was reviewed with care team (including RN and patient).

Second Draft of Dotphrase, 8/10/2023

.CNMBIRTHPLANDNP

Antepartum:

[ ] Birth plan was offered.

[ ] Birth plan was completed and reviewed with CNM.

Intrapartum:

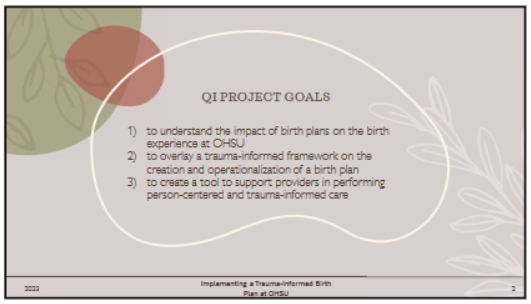
[ ] Birth plan reviewed with care team upon admission.

Appendix E

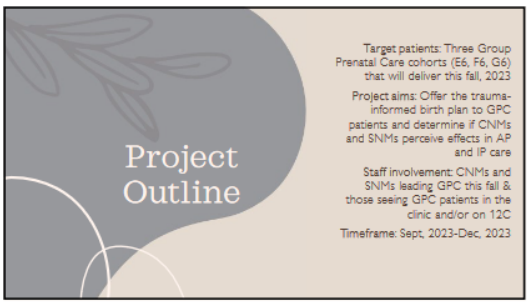
Midwifery Practice Educational Voiceover Slide Set

8/17/2023

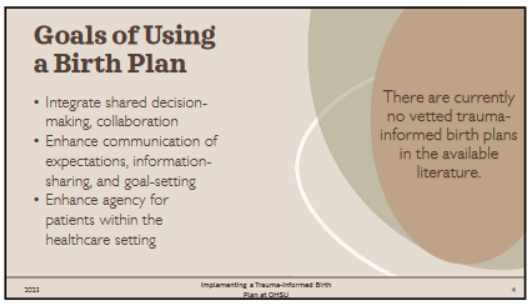
1



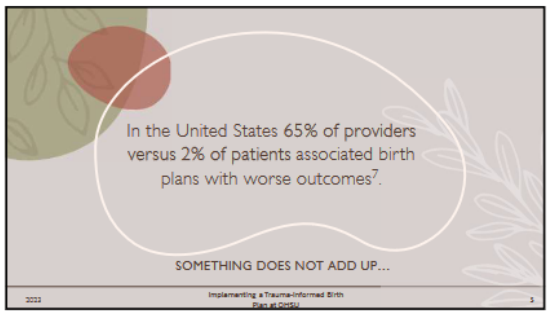
2



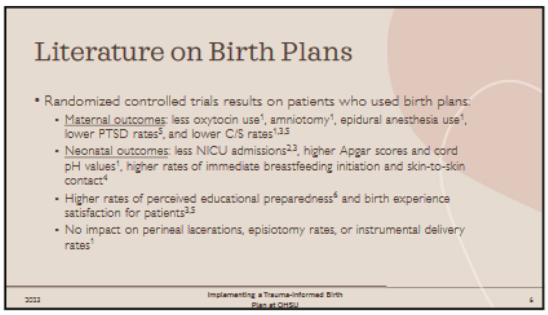
3



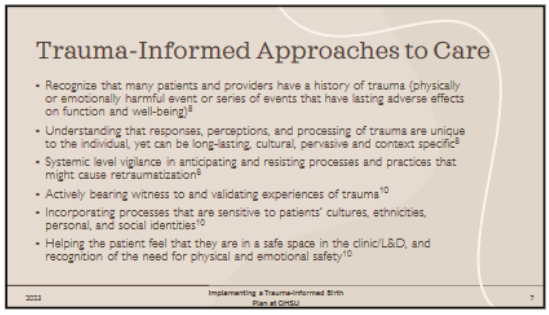
4


In the United States 65% of providers versus 2% of patients associated birth plans with worse outcomes[7].
SOMETHING DOES NOT ADD UP...
2023
Implementing a Trauma-Informed Birth Plan at OHSU
5

5


Literature on Birth Plans
• Randomized controlled trials results on patients who used birth plans:
• Maternal outcomes: less oxytocin use[1], amniotomy[1], epidural anesthesia use[1], lower PTSD rates[2], and lower C/S rates[1,2,5]
• Neonatal outcomes: less NICU admissions[2,3], higher Apgar scores and cord pH values[1], higher rates of immediate breastfeeding initiation and skin-to-skin contact[4]
• Higher rates of perceived educational preparedness[4] and birth experience satisfaction for patients[3,5]
• No impact on perineal lacerations, episiotomy rates, or instrumental delivery rates[1]
2023
Implementing a Trauma-Informed Birth Plan at OHSU
6

6


Trauma-Informed Approaches to Care
• Recognize that many patients and providers have a history of trauma (physically or emotionally harmful event or series of events that have lasting adverse effects on function and well-being)[8]
• Understanding that responses, perceptions, and processing of trauma are unique to the individual, yet can be long-lasting, cultural, pervasive and context specific[8]
• Systemic level vigilance in anticipating and resisting processes and practices that might cause retraumatization[8]
• Actively bearing witness to and validating experiences of trauma[10]
• Incorporating processes that are sensitive to patients' cultures, ethnicities, personal, and social identities[10]
• Helping the patient feel that they are in a safe space in the clinic/L&D, and recognition of the need for physical and emotional safety[10]
2023
Implementing a Trauma-Informed Birth Plan at OHSU
7

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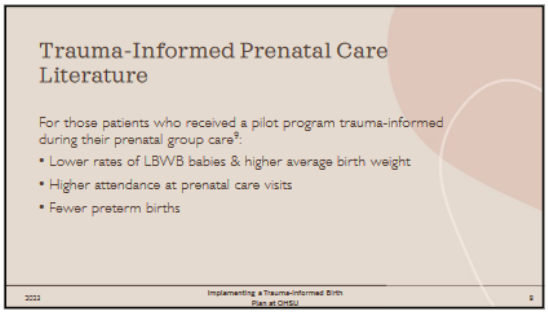
Trauma-Informed Prenatal Care Literature
For those patients who received a pilot program trauma-informed during their prenatal group care[9]:
• Lower rates of LBWB babies & higher average birth weight
• Higher attendance at prenatal care visits
• Fewer preterm births
2023
Implementing a Trauma-Informed Birth Plan at OHSU
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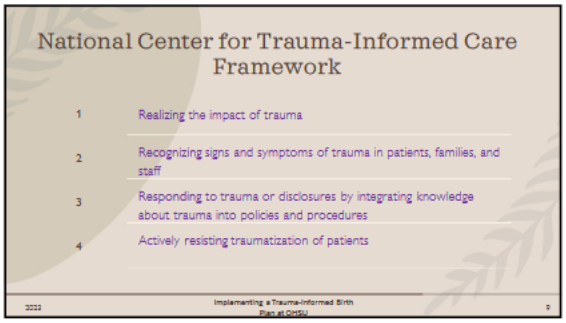

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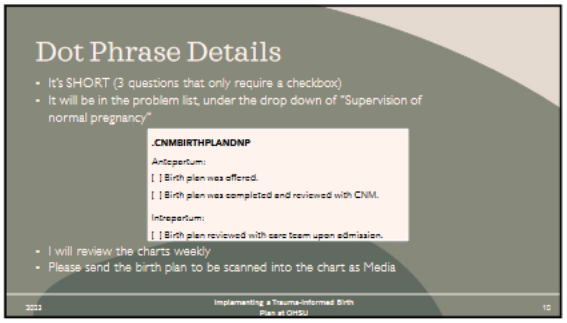

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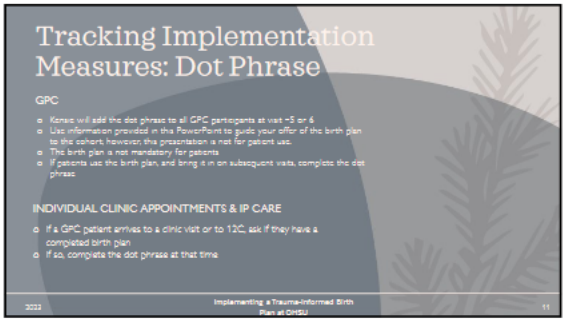

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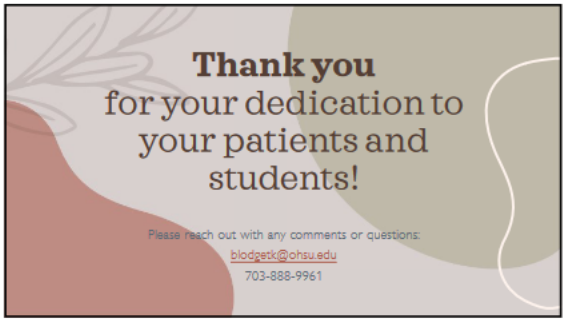

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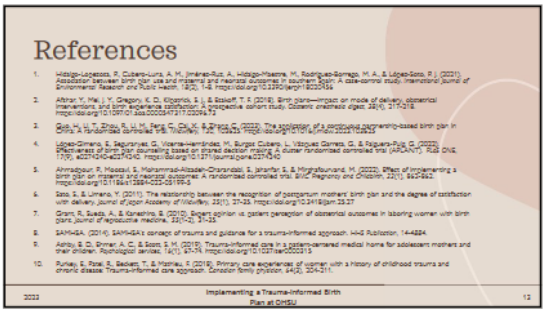
8/17/2023



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Appendix F

Birth Plan Template, Final

My Birth Preferences

with the OHSU Midwives

This form is a guide as you prepare for your birth experience at OHSU. Birth plans can help you define your values, priorities, and preferences as you explore your options. This is an opportunity to share your history on your own terms and address your unique needs. It may also enhance your comfort with the language your midwives may use, assisting you in making informed decisions as labor and birth are not predictable. It can be useful to think through your preferences for when things do not go the way you hope. Your midwives are here to support you in the way you wish to be supported.

Birth Team: (include pronouns as desired)

My name: _____

Support person(s):_____

Please check the boxes that align with your preferences about things that would make you feel safe, supported, and free to find comfort during your labor and birth. Provide comments below.

Delivery:

- ☐Position/location
- ☐Support person to help catch my baby
- ☐Mirror
- ☐Warm compresses
- ☐Active management of the third stage of labor
- ☐Delayed cord clamping: 1 min, 5 min, longer
- ☐I may want to keep my placenta
- ☐_____will cut the cord

Labor Preferences:

- ☐Ambulation/encourage mobility
- ☐Nutrition
- ☐Positioning
- ☐Birthing ball/peanutball
- ☐Birth stool
- ☐Labor tub, water immersion
- ☐Religious or cultural practices

Coping Strategies:

Without pain medication:

- ☐Visualization/Meditation
- ☐Breathing techniques
- ☐Acupressure
- ☐Massage
- ☐Sterile water injections
- ☐Hydrotherapy e.g. shower, tub
- ☐TENS unit

With Pain Medication:

- ☐Nitrous oxide gas
- ☐IV medication e.g. fentanyl
- ☐Epidural

Postpartum:

- ☐Sex of baby announcement
- ☐Skin-to-skin contact
- ☐Vaccines, vitamin K, eye ointment
- ☐Feeding choices: breastmilk, formula

Birth Environment:

- ☐Low lighting (e.g. dim, battery-candles, lamps)
- ☐Low noise
- ☐Music
- ☐Aromatherapy/diffuser
- ☐Wear my own clothing
- ☐Maintain modesty
- ☐Photos

Please provide any comments here:

OHSU

Support and Stress during Birth

Birth Plan, page 2

Past Experiences:

☐Are there any traumatic or stressful experiences now or in your past that could affect your pregnancy or birthing experience? If so, do you have a plan to manage your history of trauma?

_____

☐It is helpful to stay mentally focused during labor. Have you had any troubling experiences in the past that might get in the way of your mental focus during labor? If so, what do you think will help you with staying focused?

_____

Sometimes labor and childbirth bring up uncomfortable sensations and powerful emotions, making it hard to cope.

When faced with stressful things, I typically do things like:

_____

To manage stress or trauma, these are the things that I would find helpful during labor and birth:

_____

During labor, I would like my care team to know and do the following things to provide the best care for me:

_____

Which of the following statement sounds most like me?

☐ I like to know a lot of information ahead of time to be prepared, even if this includes worst-case scenarios. Being surprised or uninformed feels bad to me.

☐ I like to know things as they are happening but find a lot of information in advance to be overwhelming. Too much information increases my anxiety, and I'd rather that my support team filter the amount of information.

☐This is how I'd prefer to communicate during my labor:

_____

Making decisions in labor can feel overwhelming. Here are some questions you can ask if this happens:

1) What are the benefits?
2) What are the risks?
3) Are there any alternatives?
4) What is my intuition telling me?
5) What happens if we do nothing?

Appendix G

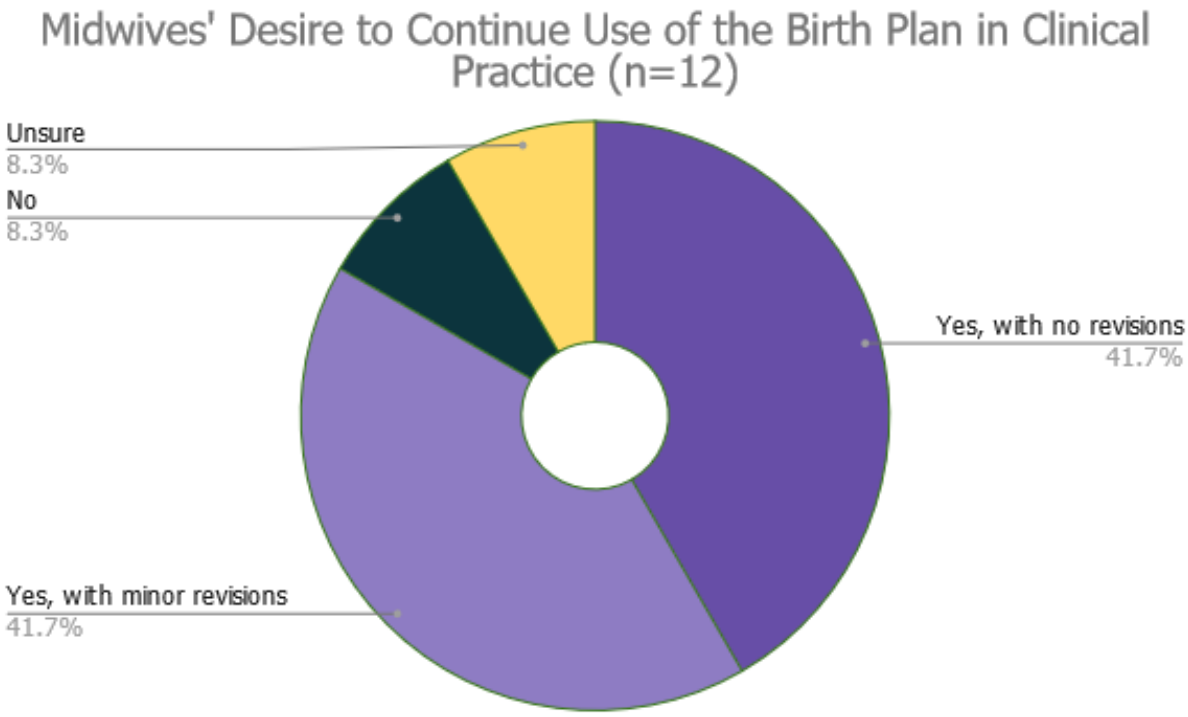
Table G-1 Key Improvement Areas and Specific Interventions for the Birth Plan Implementation

Key Improvement Area	Improvement Step	Improvement Group
Midwife understanding of birth plan	• Provided written bulleted list of main points of trauma-informed process and birth plan (*PDSA Cycle 2*)	• Midwives and student midwives running group prenatal care (GPC) cohorts • Project team
Patient uptake of birth plan	• Follow up with individual midwives and student midwives in GPC to discern interest after offering to GPC (*PDSA Cycle 2*) • Survey created for midwives and student midwives in GPC to access for areas of concerns, barriers, and general patient interest (*PDSA Cycle 2*) • Made editable version of birth plan (*PDSA Cycle 2*) • Follow up with midwives who saw patients in prenatal clinic that day or earlier that week regarding uptake up of birth plan or interest in use (*PDSA Cycle 3*) • Chart review weekly to determine midwives' use of the dotphrase to document patient interest and use of birth plan (*PDSA Cycle 1, 2, and 3*)	• Midwives and student midwives running group prenatal care (GPC) cohorts • Project team • IT consultant
Awareness of birth plan project template in practice	• Chart review weekly to determine eligible patients for project (*PDSA Cycle 3*) • Email notification to midwives and student midwives regarding practice change to offer birth plan to all prenatal patients, not just GPC (*PDSA Cycle 3*) • Preempt midwives seeing patients at approx. 30-38 weeks' gestation in clinic to offer birth plan during clinic visit day-of (*PDSA Cycle 3*)	• Midwives and student midwives running group prenatal care (GPC) cohorts • Project team
Birth plan charting process	• Attempted reformatting of birth plan for electronic medical record after visit summary (*PDSA Cycle 3*)	• Midwives and student midwives running group prenatal care (GPC) cohorts

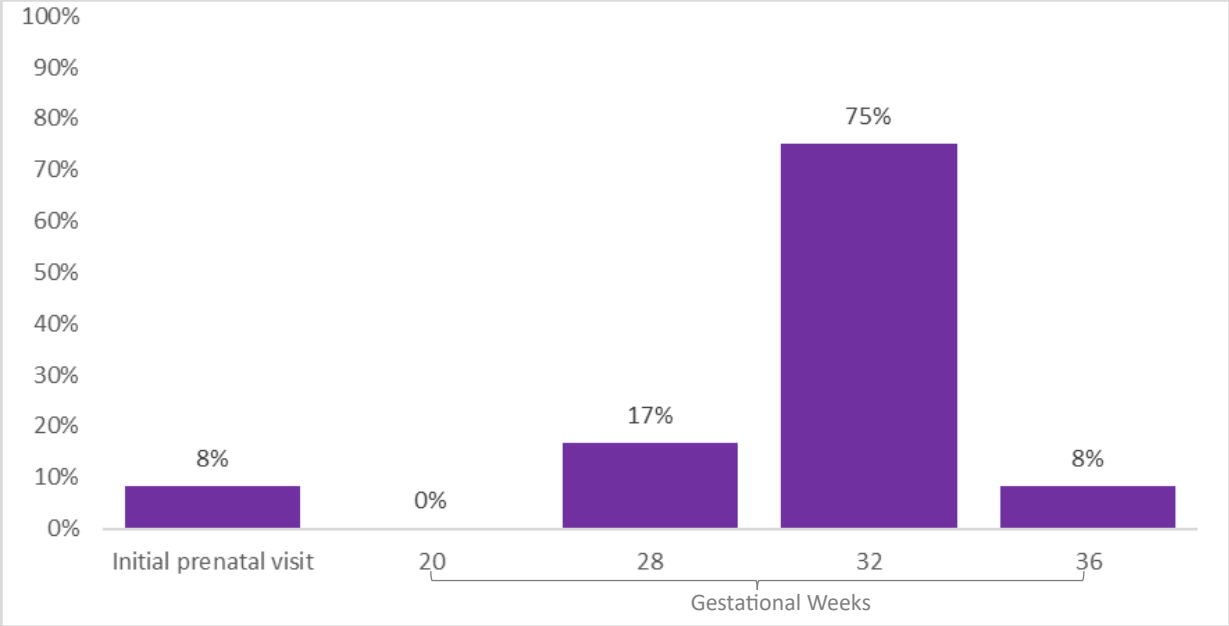
	• Chart review weekly to determine midwives' use of the dotphrase to document patient interest and use of birth plan (*PDSA Cycle 1, 2, and 3*)	• Project team • Midwife Practice Manager

Appendix H

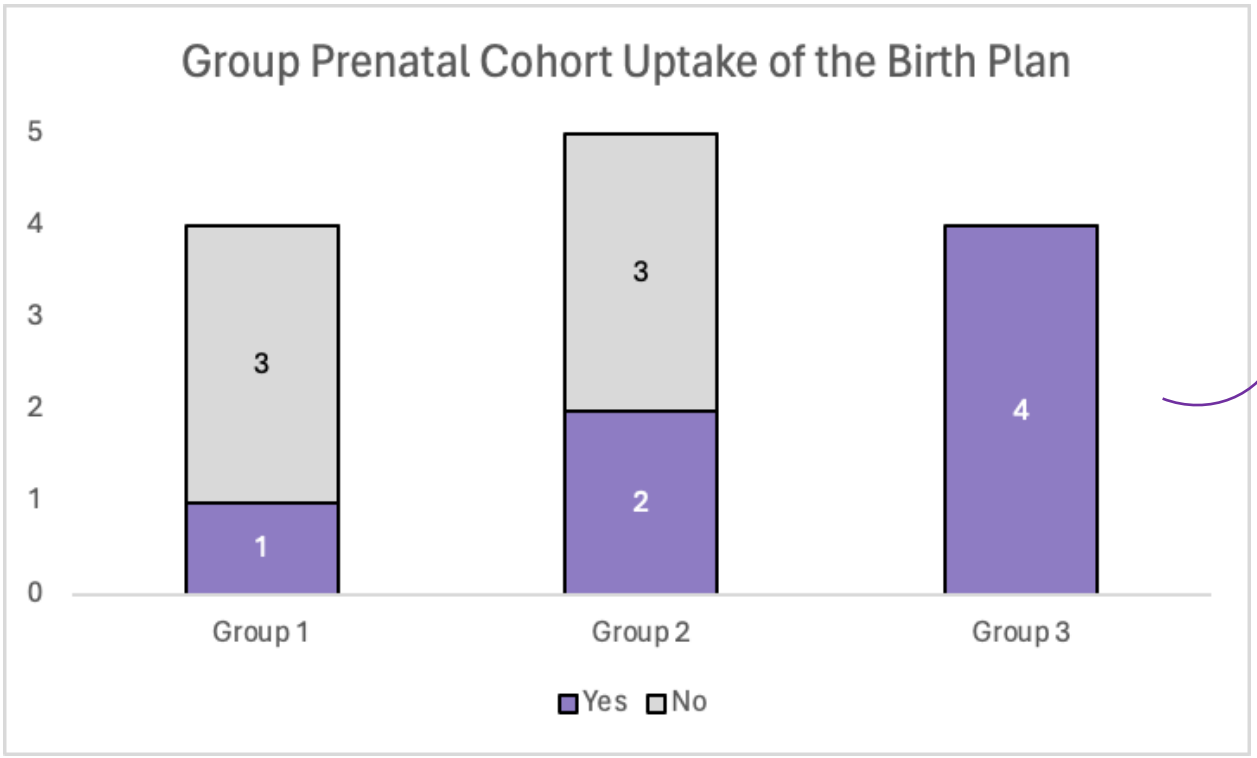
Graph H-1: Midwives' Desire to Continue Use of the Birth Plan in Clinical Practice



Graph H-2: **Survey Results of Best Prenatal Visit to Introduce Birth Plan** (n=12, but responses total more than 100% due to the select all that apply nature of the question)

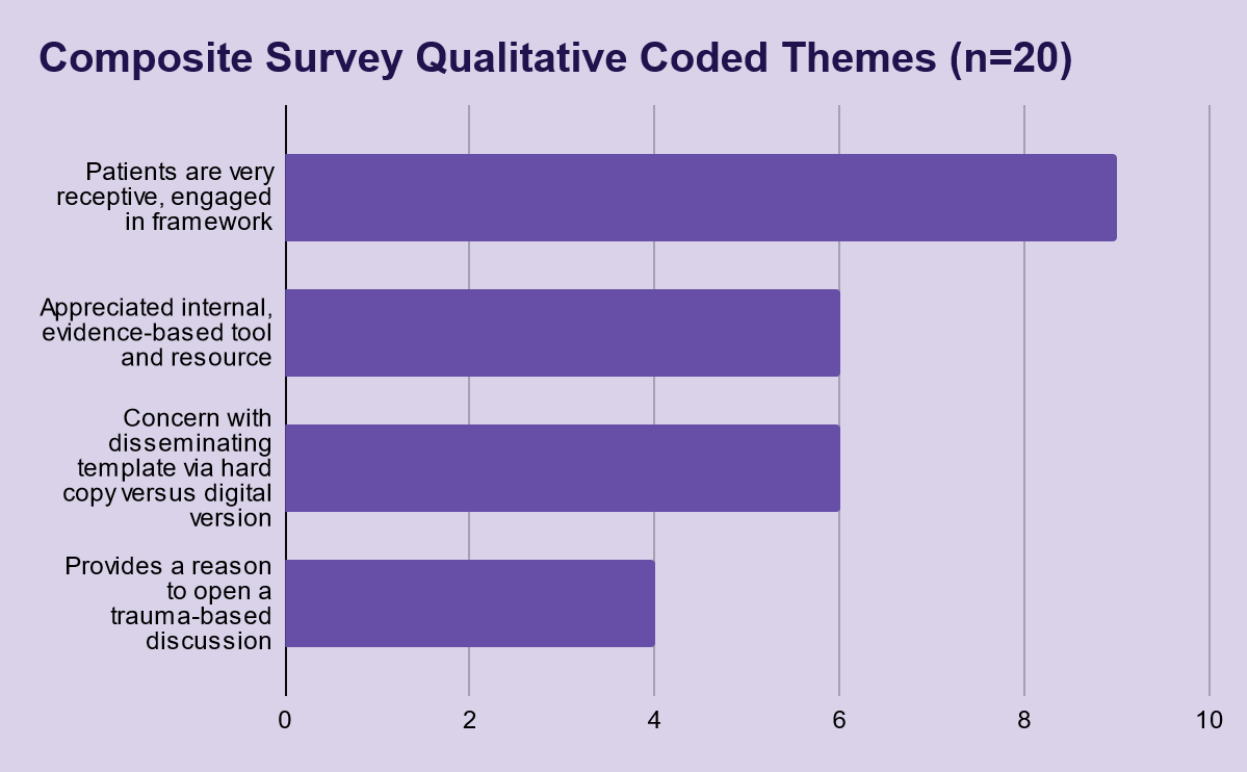


Graph H-3: Group Prenatal Care Uptake of Birth Plan



Appendix I

Chart I-1: Composite Survey Qualitative Coded Themes



Appendix J

Proposed Script Bullet Points When Offering Use of the Birth Plan

Key Points

- Evidence suggests that use of birth plans may be linked to:
  - Maternal outcomes: lower C/S rates, less oxytocin use, amniotomy, epidural anesthesia use, lower PTSD rates
  - Neonatal outcomes: less NICU admissions, higher Apgar scores and cord pH values, higher rates of immediate breastfeeding initiation and skin-to-skin contact
- Birth plans can be used as a tool to facilitate communication between providers and patients to increase shared decision-making capacity and satisfaction with care.

- Birth can be unpredictable, and your goals and wishes are important. Your preferences may need to be adjusted if medical needs arise for the safety of you or your baby.
- Your flexibility and satisfaction with your birth experience were closely linked.
- This birth plan provides an opportunity to share your values, preferences, and history and make informed decisions together with your midwives. We want to learn more about you so that we can respect your values.
- This birth plan can help you and your provider share information with each other. Including: your goals, things that were important to you and your birth support team, expectations in labor, and learning about the standard of care offered at OHSU.
- This birth plan can help establish a collaborative relationship with your midwives during the prenatal period as well as during your labor and delivery.
- Discussing some common decision points in collaboration with your midwife before you go into labor may help reduce your risk of cesarean section and using an epidural (if avoiding one is your goal). It may also help to improve your baby's transition with reducing their risk of going to the NICU.
- Remember to take the form with you (either hard copy or electronic copy) to share with your care team during clinic visits as needed and when you're in labor.

Appendix K

University IRB Determination

NOT HUMAN RESEARCH

September 7, 2023

Dear Investigator:

On 9/7/2023, the IRB reviewed the following submission:

Title of Study:	Implementing a Trauma-Informed Birth Plan in a Midwifery Practice: A Quality Improvement Project
Investigator:	
IRB ID:	STUDY00026263
Funding:	None

The IRB determined that the proposed activity is not research involving human subjects. IRB review and approval is not required.

Certain changes to the research plan may affect this determination. Contact the IRB Office if your project changes and you have questions regarding the need for IRB oversight.

If this project involves the collection, use, or disclosure of Protected Health Information (PHI), you must comply with all applicable requirements under HIPAA. See the HIPAA and Research website and the Information Privacy and Security website for more information.

Sincerely,