A Quality Improvement Project Utilizing a Clinical Practice Guideline in Women During Second-Stage Labor

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ABSTRACT

Second-stage labor is the most challenging stage of labor, as it requires increasing exertion of the birthing woman. Variances in nursing interventions in second-stage labor have an influence on outcomes. There is disparity in nursing care during second-stage labor. The purpose of this project was to evaluate a clinical practice guideline in second-stage labor with respect to positioning, timing of pushing, type of pushing effort, and the effect on birth method and perineal trauma. Spontaneous vaginal birth increased, vacuum extraction birth decreased, and vaginal birth after cesarean doubled. The rate of episiotomy decreased, the rate of multiple types of lacerations decreased, the rate of vaginal wall tears decreased, and the need for wound suturing of birth acquired lacerations decreased.

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In today's health-care landscape, organizations, and consumers are seeking health-care options that provide high-quality, efficient care, providing the best outcomes (Douma, 2015). Intrapartum care, specifically during second-stage labor, is no different. Second-stage labor, often the most demanding phase of labor, requires increasing effort by the birthing woman (Kopas, 2014). Nursing interventions during second-stage labor vary widely, in part due to clinicians providing interventions based on outmoded tradition and not on research evidence (Hamilton, 2016).

The variation in nursing care during second-stage labor influences outcomes (Moore & Moorhead, 2013). In 2015 in the United States, labor ended by cesarean in 32% of births. In the same year, there were approximately 65% spontaneous vaginal births with 2.6% of birthing women having vacuum-assistance (Martin, Hamilton, Osterman, Driscoll, & Mathews, 2017). All three of these birthing methods can be associated with maternal morbidity (Jansen, Gibson, Bowles, & Leach, 2013).

Cesarean birth incurs the risk of injury to both mother and baby, by inadvertent injury to the

neonate or to the mother's bowel, bladder, or other pelvic organs. In addition, there is the risk of hemorrhage requiring blood transfusion, wound infection, deep vein thrombosis, anesthesia complications, and even maternal death. Less serious complications involve increased pain, increased length of stay, delayed healing, delayed return to normal activities, and breastfeeding difficulties (Simpson, 2014). In addition, the neonate has increased risk of respiratory distress syndrome and alterations in normal physiologic transition to extra uterine life when born via cesarean (Jansen et al., 2013).

Vacuum-assisted births reduce some of these complications. Endometritis and wound infections are reduced with vacuum-assisted births; the risk of hemorrhage and blood transfusion are less with vacuum-assisted births. In addition, infant admissions to NICU are decreased when compared to admission rates of infants born by cesarean (Halscott et al., 2015). Yet, for babies there is a higher rate of scalp edema, bruising, abrasions, and lacerations. There is also more brachial nerve palsy seen with vacuum-assisted births than cesarean births. Other serious neonatal complications include hematoma, cephalohematoma, retinal hemorrhage, subgaleal hemorrhage, intracranial hemorrhage, and skull fracture (Lacker, 2012).

The major complications for birthing women are perineal tears. These can result from a surgical episiotomy, an unintended extension of an episiotomy, or may occur spontaneously (Lacker, 2012). Vacuum-assisted births increase the likelihood of extensive perineal trauma (Keriakos & Gopinath, 2015). The overall prevalence of perineal trauma with vaginal birth is reported to be as high as 85% (Smith, Price, Simonite, & Burns, 2013). Perineal trauma is classified by the depth of the laceration. First-degree lacerations occur in vaginal epithelium or perineal skin only. Second-degree lacerations involve only the perineal muscles, but none of the musculature of the anal sphincter. Third-degree lacerations are characterized as involving an interruption of the anal sphincter, but not including the anal epithelium, while a fourth-degree laceration involves the anal sphincter through the anal epithelium (Hajjaj, 2017; Lone, Sultan, & Thakar, 2012). Approximately 0.4% to 15% of women have significant perinatal trauma of third- and fourth-degree lacerations (Kopas, 2014; Lone, Sultan, & Thakar, 2012). Perineal trauma at birth increases the pain felt by women during and after birth. In addition, perineal trauma increases the need for suturing of the wound, analgesic medications, as well as follow up care after birth (Moore & Moorhead, 2013).

Sprague et al. (2006) introduced a clinical practice guideline (CPG) for use during second-stage labor. The CPG synthesized research data for best practice during second-stage labor. Based on physiologic birth principles, the guideline supported passive descent and rotation of the fetus through the pelvis and recommended delayed pushing for no more than 2 hours. The guideline supported allowing longer periods of time for second-stage labor, up to a total of 4 hours. Oxytocin augmentation was supported when contractions were less than adequate. Frequent position changes were included to assist fetal descent, and upright positions were encouraged. Pushing efforts promoted by the guideline were spontaneous, physiologic methods, avoiding Valsalva maneuver, and coached pushing (Sprague et al., 2006).

The results of the usage of the CPG at The Ottawa Hospital were published in 2008. The report of the outcome showed a significant increase in delayed pushing, a significant decrease in length of active pushing, with no difference in total length of second-stage labor. The results showed no significant changes in birth method in the pre- and post-intervention samples. The guideline was followed a minimum of 90% of the time (Sprague, Oppenheimer, McCabe, Graham, & Davies, 2008). Osborne and Hanson (2014) and Sommerness et al. (2017) documented usage of this CPG, as well (Osborne & Hanson, 2014; Sommerness et al., 2017).

Linking multiple interventions together as a group performed together is called bundling. Bundling is a practice of highly reliable, safety conscious hospitals (Sommerness et al., 2017). CPGs are a form of bundling, developed as nursing research is translated into practice to assist nurses to follow a series of evidence-based steps. Usage of CPGs is a method to remove variation in care while providing best practice (Revell, 2015). The aim of this paper is to describe an evidence-based practice project involving the implementation of a CPG for women in second-stage labor. The outcomes of this project are of importance to birthing professionals, nurses, doulas, and childbirth educators.

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RATIONALE

The theoretical framework for this project was Levine's conservation model. Levine (1967) postulated that there are four conservation principles within which the types of nursing interventions are implemented. These are conservation of energy, conservation of structural integrity, conservation of personal integrity, and conservation of social integrity. To provide person-centered care, the nurse specifically provides interventions which lead to the wholeness of the individual (Levine, 1967, 1969, 1988, 1996). This project used Levine's model with an intervention to delay active pushing, thus conserving the woman's energy to be able to push more effectively when the time came. Likewise, conservation of structural integrity occurred with interventions to prevent perineal trauma. Use of this model in second-stage labor care has been previously documented (Waller-Wise, 2018).

The advancing research and clinical practice through close collaboration (ARCC) model for evidence-based practice was also used to guide this project (Schaffer, Sandau, & Diedrick, 2013). The ARCC model has five steps. The first step is to assess organizational willingness to translate evidence to practice. The second step is to assess the strengths and weaknesses of the organization to change. The third step is to find mentors within the clinical agency to aid in mentoring frontline staff. The fourth step is to apply the use of evidence-based practice. The fifth, and final step, is to evaluate the outcomes of the translation of evidence into practice.

METHODS

The setting for this project was a 420-bed regional referral, not-for-profit hospital in the southeastern United States. The birthing unit, where this project was implemented, is a 27-bed labor, birth, recovery, postpartum (LDRP) unit, with a five-bed triage unit, and a 16-bed level three NICU. Within this unit, approximately 1,500 babies a year are born. The health-care providers who provided obstetrical care are all obstetricians. There are two groups of private doulas who provided support to their clients who give birth in this unit.

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The target population were women ages 19 years and older, who anticipated a living child by vaginal birth at greater than 34 weeks' gestational age after either spontaneous labor, or induction of labor. Exclusion criteria were women who had a cesarean birth prior to reaching second-stage labor, women younger than 19 years of age, women at less than 34 weeks' gestational age, and women who anticipated a stillbirth.

INTERVENTION

The intervention included the implementation of the CPG originally developed at The Ottawa Hospital, and edited with permission (Sprague et al., 2006). The CPG differentiates between women with epidural anesthesia and women without epidural anesthesia. Epidural anesthesia is more likely to decrease the urge to push and slows the rotation of baby in the pelvis. Therefore, in women with epidural anesthesia, the position of baby's head is assessed, and pushing is delayed up to 2 hours to allow passive descent and optimal rotation in the pelvis before pushing is encouraged. In women without epidural anesthesia, the CPG differentiates between nulliparas and multiparas, as noted below. When women do not have epidural anesthesia, the pushing effort is physiologic, and pushing is delayed only until the urge to push is present. However, the CPG allows for women who have never given birth before to push longer than women who have given birth before, before interventions to assist birth are instituted.

For nulliparas and multiparas with epidural anesthesia:

- Start pushing if head is visible or the urge to push is present, and the baby is at +2 station and the fetal head is facing occiput anterior.
- After 2 hours of delayed pushing, encourage pushing for all women.
- Allow a total of 2 hours of active pushing before assessment for an assisted birth.

For nulliparas without epidural anesthesia:

- Start pushing with the urge to push
- May delay pushing, if tolerated, up to 2 hours total.
- Allow a total of 2 hours of active pushing before assessment for an assisted birth.

For multiparas without epidural anesthesia:

- Start pushing with the urge to push.
- May delay pushing, if tolerated, up to 1 hour.

- Allow a total of 2 hours of active pushing before assessment for an assisted birth (Sprague et al., 2006).

The timing of pushing effort detailed in the CPG consisted of delayed pushing, until the laboring woman felt the urge to push and the fetal head had descended and rotated appropriately. If the urge to push was not felt by the laboring woman, then at the end of 2 hours she should be instructed to begin pushing regardless of urge to push. Instructions on the type of pushing effort to use were to be given when there was the urge to push, and +2 station, as per the CPG. Pushing effort was to be several short pushing efforts, and not to breath-hold for more than 6 seconds at a time. Women were encouraged to follow the body's natural urge to push (Sprague et al., 2006).

Simultaneously, throughout second-stage labor, women with epidural anesthesia were assisted to change positions every 30 minutes. Specifically, the positioning alternated between upright positions and lateral positioning. Changing positions every 30 minutes assisted the baby to rotate and descend through the pelvis (Guittier, Othenin-Girard, Irion, & Boulvain, 2014; Ondeck, 2019). Women without epidural anesthesia were allowed to find positions of comfort but were encouraged to change positions at least every 30 minutes. Upright or lateral positioning were encouraged.

The approach chosen to evaluate the effectiveness of the CPG on second-stage labor outcomes was a before and after design. Data were collected by chart review prior to the implementation of the CPG, for demographic and outcomes of interest on patients who received standard care. Pre-implementation standard care related to timing of pushing was that nurses encouraged the patient to push based on instructions from the obstetrician, which varied from provider to provider. Standard care for pushing effort was closed-glottis, directed pushing with breath-holding for 10-seconds or more. Standard care for positioning in second-stage labor varied from nurse to nurse but was often semi-recumbent with the patient's legs in stirrups. The same data were collected after the intervention of the CPG, to determine demographic and outcome data on patients who received the intervention.

Measurement Tool

The principle investigator created the form that was used to collect data. The form was subject to expert review for validity and reliability by two doctorate-prepared nurses. The charts for the pre- and post-intervention groups were reviewed for the demographic information of age, gravidity, and parity. These data were collected from the facility's standardized electronic health record (EHR). The labor summary flowsheet was utilized to collect the data related to type of birth, and perineal trauma resulting from birth. Data related to the presence of, and type, number, and degree of laceration(s) or episiotomy were collected from the physician progress notes. Whether or not suturing was required was also collected. These outcomes were selected to determine differences, if passive descent and rotation with interventions per the CPG, would be seen between the pre- and post-intervention samples. This data was recorded on the investigator-created data collection form.

The labor flowsheet was reviewed to determine fidelity with the CPG in the post-intervention group. Specifically, intervention fidelity was determined by documentation of delayed pushing until the patient had the urge to push or for 2 hours, and position type and changes every 30 minutes. The fetal monitor strip and flowsheet were reviewed for type of pushing effort, and to determine length of breath-holding. By looking at the contraction portion of the fetal monitor strip (if used), the frequency and length of pushing effort could be quantified.

Prior to the implementation of the CPG, educational sessions for nurses and physicians were conducted, funded by the hospital. This was the only funding provided to this project. The educational sessions included all nurses working in the birthing unit, excluding only those on medical leave. It was determined from pre-education questions that most of the nursing staff knew the best evidence for second-stage labor care prior to coming to class. It seemed from the discussion of the nurses that lack of care standardization and support prevented them from implementation of best practices. The nurses expressed that they did not, or were not, allowed to practice the best evidence. Their comments referred to lack of support from administration, as well as physician practices. At the end of the educational intervention, eight mentors were identified from the nursing staff,

The incidence of multiple types of lacerations, such as, perineal, labial, vaginal wall, periurethral, and/or periclitoral was decreased from the pre-intervention sample to post-intervention sample and was statistically significant.

half from the dayshift and half from the night shift. Role-play during class identified challenges in dealing with the medical staff. Education of the physician staff was completed as planned but at the end of the educational intervention there were significant concerns raised and barriers to implementation identified.

Communication issues were numerous throughout implementation of the project. For example, after the initial education sessions with the nurses, the principle investigator was prohibited from communicating directly with the whole of the nursing staff. Instead, the principle investigator was instructed to only communicate with the eight mentors that had been identified. Therefore, no follow up communication with reminders to nursing staff was done, as issues with non-compliance were identified. While there were letters of support initially submitted by nursing, administration, and medicine, the actual support for the project seemed lacking after the initial education sessions.

Data were collected via chart reviews, then analyzed with non-parametric tests between the pre-intervention and post-intervention samples. All results were considered statistically significant if p values were <.05. Chi-square tests were conducted to examine the differences between pre-intervention and post-intervention methods of birth, wound suturing, and vaginal wall tears. Mann–Whitney U tests were used to examine the differences in the pre-intervention and post-intervention samples for incidence of episiotomy, as well as multiple types of lacerations resulting from vaginal birth.

ETHICAL CONSIDERATIONS

Prior to beginning this project, approval was obtained from the institutional review boards (IRBs) of the hospital and a state university. Approval was initially obtained by expedited review at both the hospital and university, however, a full IRB review was determined necessary by the clinical agency in order to protect human subjects' rights. After the review was completed, approval was granted. There were no potential conflicts of interests identified.

Childbirth educators and nurses should advocate for the use of an evidence-based second-stage labor care with bundled interventions, like that of a CPG.

RESULTS

There were 260 births occurring during the pre-intervention data collection time frame of 2 months. A total of 103 births were excluded due to the project's exclusion criteria. There were 48 (18.46%) excluded because they were by repeat cesarean, eight (3.08%) were excluded due to the age of the mother, six (2.31%) were excluded because the gestational age was less than 34 completed weeks, three (1.15%) were excluded due to stillbirth, 16 (6.15%) were excluded due to scheduled primary cesarean, and 22 (8.46%) were excluded because the women did not reach the second-stage of labor. The final sample for the pre-intervention group was $n = 157$.

There were 519 births occurring during the post-intervention time frame of 4 months. A total of 215 births were excluded for pre-determined criteria. There were 102 (19.65%) excluded because they were by repeat cesarean, 16 (3.08%) were excluded due to the age of the mother, 18 (3.47%) were excluded because the gestational age was less than 34 completed weeks, nine (1.73%) were excluded due to stillbirth, 24 (4.62%) were excluded due to scheduled primary cesarean, and 46 (8.86%) were excluded because the women did not reach the second-stage of labor. This left a sample of $n = 304$. Of the remaining 304, the CPG was not used in 187 (61.51%) of the sample. Therefore, the CPG population or post-intervention sample was $n = 117$ (38.49%).

The pre-intervention ($n = 157$) and post-intervention samples ($n = 117$) were compared. The mean age of the women was similar at 26.89 in the pre-intervention sample, as compared to mean age of 26.98 in the post-intervention sample. The median gravidity and parity in the pre-intervention sample was 2.0 and 1.0, respectively. The median gravidity and parity in the post-intervention sample was 3.0 and 1.0, respectively. Parity was compared with the Kruskal-Wallis test, equal variances assumed, revealing that gravida ($p = .01$) and parity ($p = .004$) were significantly different between the two samples. There was no significant difference in age between the two groups. Table 1 displays the median and range related to age, gravidity and parity of the pre-intervention and post-intervention samples.

Spontaneous vaginal birth occurred in 87.9% of the pre-intervention group and increased to 93.2% in the post-intervention group. The vacuum extraction rate decreased from pre-intervention to post-intervention, and the vaginal birth after cesarean rate rose from 2.5% in the pre-intervention sample to 5.1% in the post-intervention sample. The

TABLE 1

Description of the Sample

Pre- and Post-Sample Median, Range of Age, Gravidity, and Parity				
	Pre-intervention		Post-intervention	
	Median	Range	Median	Range
Age	27	19–41	26	19–45
# prior pregnancies	2	1–8	3	1–8
# prior births	1	0–7	1	0–7

TABLE 2

Method of Birth

Chi-square of Sample and Method of Birth						
	Pre-intervention	Total	(*N* = 157)	Post-intervention	Total	(*N* = 117)
	n	%	%	*n*	%	%
Spontaneous vaginal	138	87.9	87.9	109	93.2	93.2
Vacuum extraction	14	8.9	8.9	2	1.7	1.7
Vaginal birth after cesarean	4	2.5	2.5	6	5.1	5.1
Cesarean birth	1	0.6	0.6	0	0	0
Total	157	100	100	117	100	100

Note. $\chi^2_{(3)} = 8.139$. $p < .05$. *N* = number.

change in method of birth from pre-intervention to post-intervention was statistically significant ($\chi^2_{(3)} = 8.139$, $p < .05$) as found in Table 2.

Possible laceration types noted in the samples were perineal, labial, vaginal wall, periurethral, and periclitoral. In the pre-intervention sample, 67.5% had some type of perineal trauma or laceration, while that number decreased to 53.8% in the post-intervention sample. In the pre-intervention sample, 60.5% of the women had lacerations that required suturing. In the post-intervention sample, only 40.2% required suturing of birth acquired lacerations. The decrease in the requirement for suturing of lacerations acquired during the birthing process was statistically significant ($\chi^2_{(1)} = 11.10$, $p < .01$), as shown in Table 3. There was also a statistically significant decrease of women experiencing a vaginal wall laceration during birth ($\chi^2_{(1)} = 6.043$, $p < .05$) in the post-intervention sample as found in Table 4.

The episiotomy rate decreased from 7.6% in the pre-intervention sample to 0.9% in the post-intervention sample. In the pre-intervention sample, there was one third-degree extension of the episiotomy, and no incidence of extension of the episiotomy in the post-intervention sample. In Table 5, the frequencies of episiotomy for pre-intervention and post-intervention samples are shown. Episiotomy rates in the post-intervention sample were significantly lower than the pre-intervention sample ($U = 8560.50$, $p < .01$).

The incidence of multiple types of lacerations, such as, perineal, labial, vaginal wall, periurethral, and/or periclitoral was decreased from the pre-intervention sample to post-intervention sample and was statistically significant ($U = 7998.00$, $p < .05$). The frequency of women experiencing multiple types of lacerations are depicted in Table 6. There were no occurrences of missing data in any of the categories.

DISCUSSION

This evidence-based practice project demonstrated the use of a CPG to direct nursing care during the second stage of labor. Statistically significant outcomes were noted with both method of birth and perineal trauma. Spontaneous vaginal birth increased, vacuum extraction birth decreased, and vaginal birth after cesarean doubled between the pre- and post-intervention time frames. In this project, the rate of episiotomy decreased, the rate of multiple types of laceration decreased, the rate of vaginal wall tears decreased, and the need for wound suturing of birth acquired lacerations decreased. Thus, the project showed a benefit of improved maternal outcomes. The strengths of this project included moderate-sized samples, the use of staff education along with CPG implementation, and high-stake outcome measurement.

TABLE 3

Perineal Lacerations Requiring Suturing

Chi-square of Sample and Wound Suturing						
	Pre-intervention	Total	(*N* = 157)	Post-intervention	Total	(*N* = 117)
	n	%	%	*n*	%	%
None	62	39.5	39.5	70	59.8	59.8
Required suturing	95	60.5	60.5	47	40.2	40.2
Total	157	100	100	117	100	100

Note. $\chi^2_{(1)} = 11.10$, $p < .01$. *N* = number.

TABLE 4

Vaginal Wall Tears or Lacerations

Chi-square of Sample and Vaginal Wall Tear/Laceration						
	Pre-intervention	Total	(*N* = 157)	Post-intervention	Total	(*N* = 117)
	n	%	%	*n*	%	%
None	141	89.8	89.8	114	97.4	97.4
Vaginal wall laceration	16	10.2	10.2	3	2.6	2.6
Total	157	100	100	117	100	100

Note. $\chi^2_{(1)} = 6.043$, $p < .05$. *N* = number.

TABLE 5

Frequencies of Episiotomy

Frequencies of Episiotomy				
	Pre-intervention	(*N* = 157)	Post-intervention	(*N* = 117)
Frequencies	*n*	%	*n*	%
None	145	92.4	116	99.1
Second degree	11	7.0	1	0.9
Third-degree extension	1	0.6	0	0

Note. N = number.

TABLE 6

Frequencies of Multiple Different Types of Tears or Lacerations With Birth

Frequencies of Multiple Types of Tears/Lacerations				
	Pre-intervention	(*N* = 157)	Post-intervention	(*N* = 117)
Frequencies	*n*	%	*n*	%
None	51	32.5	54	46.2
One type of tear/laceration	88	56.1	51	43.6
Two or more types of tear/laceration	18	11.5	12	10.3

Note. N = number.

The current project's outcomes can be compared with a similar study conducted by Sommerness et al. (2018), which utilized the same CPG for women with epidural anesthesia. Sommerness et al. (2018) reported results that demonstrated the rate of vacuum extraction birth decreased by half and spontaneous vaginal birth increased in their sample.

This project produced a lower episiotomy rate in the post-intervention sample. It is possible that the lower episiotomy rate was a Hawthorne effect, since the obstetricians knew that the CPG had been introduced, even though there was no researcher present on the unit. The noted decrease in multiple laceration types, vaginal wall lacerations, and need for wound suturing could be related to parity of participants in the post-intervention sample, which was higher than in the pre-intervention sample. However, it is logical to think that passive descent and rotation of the fetus aided in the decrease in lacerations and wound suturing. This is especially true when thinking of the outcome of vaginal wall lacerations. In this project, by allowing passive descent and avoiding active pushing effort, the investigators concluded that friction on the vaginal wall was reduced, and thus, vaginal wall

lacerations decreased. The decrease in vaginal wall tears with the use of the CPG is a finding unique to this study. Overall, lacerations would be decreased as active pushing decreased. It also seems that the depth of the lacerations lessened, as evidence by the decreased need for lacerations to be sutured.

Garpiel (2018) reported on a comparable project, where maternal outcomes also improved. While the project reported by Garpiel (2018) did not use the same CPG, the interventions were nearly identical. Garpiel also collected pre-intervention data for 2 months, and post-intervention data for 4 months. The difference in this project and the project described by Garpiel (2018) was differing outcome measures. Garpiel looked at outcomes of maternal morbidity, for example, chorioamnionitis, postpartum hemorrhage, and shoulder dystocia. The benefits of using a standardized format for care for evidence-based second-stage labor nursing interventions is validated by both this project and by Garpiel (2018).

Sommerness et al. (2018) reported non-adherence of the CPG of 42% in their study. This can be compared to this project, which had a non-adherence rate of 61.51%. Data related to reasons for non-adherence of the CPG in this project were not collected. In this project, the low adherence rate seemed to eliminate women with lower parity from the post-intervention sample, as there was a significantly higher parity in the post-intervention sample using the CPG.

LIMITATIONS

While the results of this project indicate an advantage to allowing passive descent and rotation of the baby prior to the active pushing phase of birth, there are several noteworthy limitations of this work. The sample population is distinct in its location in the southeastern United States, and conclusions of this project may not be generalizable to other populations. Likewise, the project findings are limited due to the lack of full implementation, as the CPG was only used in 38.49% of the eligible birthing women. In fact, most women included in the post-intervention sample only met inclusion criteria at the first level of the CPG, requiring minimal nursing interventions. Only a fraction of women in the post-intervention group had nursing interventions of delayed pushing and/or position changes during second-stage labor. At the same time, the post-intervention sample had significantly higher parity than the pre-intervention sample. Therefore, outcomes could be attributed to increased parity rather than the interventions of the CPG implementation.

Another notable limitation is that the documentation of individual providers could not be checked for validity or reliability. It is likely that documentation between providers varies slightly. Data was extracted just as it was written. It was assumed that any discrepancies would be spread equally among the charts in this project.

The format of this project required a pre-intervention and post-intervention group that were separate individuals. There was not matching of characteristics between the pre-intervention and the post-intervention groups. While the groups were similar in characteristics, slight variation in attributes exist, such as parity.

IMPLICATIONS FOR PRACTICE

The project described in this report has substantial potential to influence the achievement of more positive birth outcomes. However, it is unlikely that the implementation of the CPG for second-stage labor will be sustained in this project setting. Although, significant positive findings were revealed through implementation of this project, several barriers to sustainability were present.

It was evident, through data collection, that adherence to the CPG was only partial. Of the charts included in the chart review outcomes, many of those met criteria to be included in the post-intervention sample simply because the patient met the criteria to begin pushing at the time complete dilatation was discovered. The only difference between these and the pre-intervention processes were the type of pushing technique and positioning used. Only six chart reviews demonstrated utilization of interventions associated with delayed pushing, change of positions every 30 minutes while pushing, or other steps of the CPG.

There were also excluded charts where there were some interventions of the CPG used, however, these interventions did not reflect complete adherence to the guideline. There was a trend noted, where certain nurses were more likely to utilize the CPG than others. Two of these nurses were among the mentors identified during the educational sessions. Perhaps these nurses will continue to advocate for evidence-based practice, such as this CPG. However, to be sustainable there must be support from both nurse managers, as well as staff nurses (Harper et al., 2017).

Bedside nurses have the most influence in the appropriateness of care that the patient receives

(Friesen et al., 2017). Yet, most nurses practice in the way they learned in nursing school or were mentored in their early jobs. It is this traditional culture that prevails, as the cultural knowledge is passed from one to another (Breckenridge–Sproat et al., 2015). To change this traditional culture, nurses must be educated, mentored, and have ample resources to translate evidence into practice. It is therefore recommended that education about evidence-based second-stage labor support begin in pre-licensure nursing programs.

This takes organizational support to accomplish and sustain (Friesen et al., 2017). Nurses who are supported to enhance care provision and learn to value evidence-based practice at the bedside report better-quality patient outcomes, greater job satisfaction, and less staff turnover (Melnyk et al., 2017). In addition, research by Kim et al. (2017) indicated that evidence-based practice implementation leads to more job satisfaction and group cohesiveness amid nurses in their study (Kim et al., 2017). State boards of nursing should consider developing mandatory continuing education for labor and birth registered nurses as a precursor to license renewal. Clinical ladder criteria, present at many large and magnet status health-care centers, should include mastery of these second-stage labor techniques, as well as nursing support for physiologic birthing. Finally, accreditation bodies, such as the Joint Commission, should adopt this CPG as standard care and evaluate labor and birth units accordingly.

Childbirth educators and nurses should advocate for the use of an evidence-based second-stage labor care with bundled interventions, like that of a CPG. Nurses, and especially advanced practice nurses, can assess the facilitators and barriers of evidence-based practice. Once these factors are known, a scheme for incorporating evidence-based practice can be fostered to improve non-compliance (Hanson, 2015). Childbirth educators can educate class participants related to evidence-based second-stage labor practices. Educators teaching evidence-based practice, such as independent, certified childbirth educators are in the best position to teach these. Educators who are employed by hospitals should advocate for evidence-based practice rather than simply teaching hospital norms.

Because there were positive outcomes of this project, given the limitations that have been described, it is recommended that this project be replicated in other settings. Within a setting of increased support and increased compliance with the CPG, outcomes should be assessed and compared with the outcomes of this project. Replication of this project, using bundled evidence-based interventions, adds to the body of knowledge for care during second-stage labor. Such replication should consider having an investigator present at all births to verify usage of the guidelines, and to document reasons for non-compliance. In addition, replication should be done to substantiate the finding of decrease vaginal wall tears with the use of this CPG.

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