2. PATIENT SAFETY BEST PRACTICE PROJECT SUMMARY

Project summary should include a description of the project. The description should include the goal(s) of the project, rationale for the project, disciplines involved, project timeframes and summary of the outcome(s) of the project.

Goal of the project: To improve the safety of induction and augmentation of labor as evidenced by ≥ 95% achievement of ‘bundle’ criteria. Rationale for the project: Pregnancy and childbirth was the most common reason for hospitalization of females in 2009 (AHRQ HCUP Facts and Figures, 2011). Childbirth is the largest category for hospital admissions for both commercial payers and government Medicaid programs (Childbirth Connection, 2008). At most institutions, over half of all births are the result of induced or augmented labor. The most commonly used drug to augment or induce labor, oxytocin, has been named a high alert medication by the Institute for Safe Medicine Practices. Mother-infant dyads undergoing labor induction and augmentation are at increased risk of exposure to the top areas of perinatal harm including inappropriate use of oxytocin, uterine tachysystole, non-reassuring fetal heart rate patterns, failure to perform cesarean section in a timely fashion, and inadequate resuscitation of an infant. Inappropriate or mismanagement of induced or augmented labor also leads to increased healthcare costs, particularly from the complications of cesarean delivery and neonatal special or intensive care. Safety during labor induction and augmentation is critical and applies to the majority of births today. Disciplines involved: This project involved every discipline across the continuum of care from prenatal care providers, prenatal office managers and schedulers, to inpatient secretaries, nurses, physicians, informaticists and administrators. Project Timeframes: The ‘bundling’ project began in the spring of 2008 with the development of a multidisciplinary Perinatal Safety Team. An audit team established baseline results and began tracking monthly bundle results in the fall of 2008. An innovative, multi-pronged safety project followed (described in ‘Implementation’) to maintain and achieve results. This project continues today and has evolved to further advance bundle criteria for improved safety, quality and cost outcomes. Summary of the project’s outcomes: Achievement of bundle criteria has met the goal of ≥95 compliance and placed Summa Akron City Hospital among the best of all Premier Perinatal Safety Initiative hospitals nationwide in bundle results. Related national quality measures of cesarean for first birth mothers and elective delivery are among the best in the state of Ohio.

3. IMPLEMENTATION PLAN

Outline the project's implementation plan. How did this implementation plan aid in the success of the project? What did you face and what lessons did you learn during the implementation of the project?

Implementation Plan Outline the project's implementation plan: Healthcare quality ‘bundling’ is a metric of effective and safe care, generally comprised of three to five essential, evidence-based practices. When bundled together, these best practices significantly improve outcomes of procedures with inherent risk. The implementation of ‘bundling’ inductions and augmentations of labor has required an intensive, multidisciplinary and multi-pronged approach at our
institution, which included the following: 1. Development of a Perinatal Safety Team that recommended practice changes to our Obstetrics Operations and Departmental committees. A subset of this team included a group of bundle auditors who review 40 cases per month for achievement of bundle criteria. The monthly audits have led to multidisciplinary follow-up, extensive education and widely disseminated results, all which have helped counter resistance and normalization of deviance. 2. With administration support and leadership from physicians and nursing, an Induction Scheduling and Consent Form was developed. This form included many of the markers for bundle achievement, such as Bishop score and estimated fetal weight. A few other institutions nationwide have developed standardized Induction Consent Forms. However, this form is innovative and unique as it delineates the scheduling procedure and mirrors the American College of Obstetricians and Gynecologist Practice Bulletin #107, Induction of Labor. This was strategic in order to enhance physician acceptance of necessary practice changes. Such provider practice changes include standardization of documentation, elimination of elective delivery at < 39 weeks of gestation and a focus on cervical favorability prior to induction. 3. A ‘hard-stop’ process to block inappropriate deliveries less than 39 weeks’ at the point of scheduling with a chain of command support was implemented at the start of the project. We networked nationally to develop the ‘hard stop’ process. Our rollout came 2 months before Dr. Steven Clark’s publication on ‘hard stops’ in the medical literature, but the article certainly gave a name to our process! 4. Uterine tachysystole, or too many contractions from the administration of oxytocin, is a top safety issue nationwide and has become an area of excellence for Summa Women’s Health services. Uterine tachysystole is one of the bundle criteria. A collaborative multidisciplinary team developed an Oxytocin Administration Algorithm to emphasize policy and the evidence with color-coded directions and posted at every bedside. The algorithm has been a great success, being highlighted at the Association for Women’s Health and Neonatal Nurses national conventions in 2009 and 2010 and has also been published in the Journal for Obstetric, Gynecologist and Neonatal Nurses in 2011 (Doyle, Kenny, Burkett, von Gruenigen). 5. Our team is advancing the current bundle criteria. A research team of nurses and physicians has mother-infant dyads achieving bundle criteria, suggesting an enhancement of one of the bundle criteria significantly improves quality and cost. We are also looking at national collaborations to promote the advancement of bundling. How did this implementation plan aid in the success of the project? Administration support was excellent, providing the funds and time necessary to produce results. Physician leadership was strong and worked well with nursing. Including the schedulers and secretaries in the planning and those at the ‘front line’ ensured a reasonable and practical plan that worked. What did you face and what lessons did you learn during the implementation of the project? Repeat messaging on a monthly basis was essential. When you base your work and communications on safety and the evidence, change will eventually come and people will follow. The voice of patient safety wins! Patience was also important as it likely takes much time, many meetings and re-education for results.

**4. MEASURABLE GOAL ESTABLISHED, OBTAINED AND SUSTAINED** Describe the goal(s) of the project, outline whether the goals were achieved and sustained. Have you met or exceed your goals? How long have these results been sustained?

Within 6 months, elective inductions in full compliance with bundle criteria reached >95% per month. After 12 months, augmentations in full compliance with bundle criteria reached >95% per month. We are the only Premier Perinatal Safety Initiative Hospital meeting the reliability criterion for both bundles. Also, we have maintained zero incidence of birth trauma and injury to neonates. (See graphs)
5. REGIONAL AND NATIONAL BENCHMARKS RESEARCHED, IDENTIFIED Patient safety benchmarks were identified and utilized in the project. The goal(s) of the project were compared to the identified benchmarks.

We believe preventing inappropriate inductions have also affected our cesarean rate, particularly for nulliparous, term, singleton, vertex women. This cesarean rate is a nationally utilized, risk-adjusted metric required by the state of Ohio and The Joint Commission and posted for the public on quality websites. Significant improvement has ranked us almost three percentage points better for 2010 than the average rate of Ohio hospitals. We have also been lower than the National Perinatal Information Center academic hospital average for postpartum hemorrhage and intrauterine hypoxia and birth asphyxia. (See Cesarean and Elective Delivery charts)

6. REPLICABILITY How can this project be replicated at other health care provider locations? How would other organizations benefit from replicating this project?

How can this be replicated at other institutions? Certainly these practices and results can be replicated. Currently, Summa Akron City Hospital is rolling out the Induction and Augmentation Bundles to our satellite facilities. We have openly shared many of our policies, processes and forms throughout our region, Ohio and nationwide. We have shared our story through poster presentations, journal publications as well as speaking engagements on the national level for ACOG and AWHONN. In order to achieve such practice changes, three key elements must be present. First, there must be administrative support. This requires not only an administrative “lip service” but a willingness to challenge the status quo and provide financial support. There is a significant financial investment that must be made in order to perform monthly bundle audits, provide education and plan interventions. Second, physician leadership is critical to bring about many of the practice changes that are required by physicians. The physician leaders must be champions for the project, to lead by example and challenge protocol deviance. Third, nursing leadership is a key driver to move the process forward, perform bundle audits and monitor daily practices. Together, administration, physicians and nurses can work together to counter unsafe and outdated practices in order to bring about meaningful change to better serve the women and babies that we care for. How would other organizations benefit from replicating this project? Labor induction and augmentation is associated with negative profit margins and high malpractice claims. Nationally, healthcare is awakening to the idea of high-reliability and just culture. Through evidence-based bundle implementation, significant reduction in many of the variables that contribute to higher acuity, increasing cost and poor outcomes is possible. Undoubtedly, this type of improvement should appeal to anyone associated with women’s health care. Not only is it beneficial to the bottom line, it is the right thing to do for the women and babies we serve.

7. PARTNERSHIPS AND MULTIDISCIPLINARY APPROACH What partnerships were developed and utilized in order to facilitate the success of the project? What were these partnerships essential to the success of the project? What disciplines were involved in the project and how did they aid in its success?

What partnerships were developed and utilized to facilitate success? Change cannot occur in a vacuum. Summa, Akron City took a multidisciplinary approach to this endeavor from the beginning. Local, state and national partnerships did contribute to the successes we have achieved. The initiation of the journey began as part of a national partnership with the Premier Perinatal Safety Initiative. Fortunately, other partnerships supported our work, such as the Ohio Perinatal Quality Collaborative and the Consortium for Safe Labor. Within our own hospital, a
multidisciplinary approach was taken to develop an Oxytocin Administration Algorithm, a Scheduling Induction/Consent Form and many policies/procedures. These included not only administrators, nurses and physicians but adjunct supports such as scheduling staff, legal and risk management. Listening from every voice is essential. What were the partnerships essential to success? National partnerships such as the Premier Perinatal Safety Initiative and the Consortium for Safe Labor are key to success. National partnerships allow a standard and expectation to be set that cannot be countered by local resistance. State collaborations such as the Ohio Perinatal Quality Collaborative (OPQC) also support the changes being instituted. This further illustrated the fact that these safety measures and practice changes were not just a “Summa thing” but rather, state and national markers for best practices. Finally, partnerships that were formed internally between administrators, physician leaders and nurse leaders are also essential. These internal partnerships forged a bond that has allowed evidence-based innovation to flourish and expand. What disciplines were involved? Specifically at Summa, Akron City Hospital, multiple disciplines were engaged in the process of meeting the induction and augmentation bundles. The necessity of administration, physician and nursing leadership has been explained. However, many others were involved as processes and procedures were developed. These included scheduling staff, staff nurses, resident physicians, attending physicians, risk management, legal services and neonatology representatives. How did they aid in success? During the process of change, it is important to include the people most affected by those changes. Unit staff offered practical advice and the ability to foresee barriers that leadership did not expect. Preemptive measures were taken to overcome barriers to bundle implementation. Additionally, including so many into the process allows for ownership by the whole group. Therefore, change is not seen as forced from the top but as a shared responsibility.