Preterm Neonatal Care: Quality Improvement

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Quality improvement aims to progress the results of an action by utilizing data to monitor and evaluate nursing practices and implementations with hopefulness for improvement (Houser, 2018). Quality improvement is significant when it comes to nurses' knowledge, attitudes, skills, and behaviors. Furthermore, quality improvement allows nurses to use their knowledge to brainstorm methods or techniques to change the implementation of patient care for the better. Nurses can then use their proficiencies and change some parts of their practice while in a clinical setting. If there is an improvement, the nurse may better value the applied change and feel validated in their nursing role (QSEN Institute, 2020). This paper is about improving the life of preterm neonates, focusing on implementing delayed cord clamping (DCC) instead of immediate cord clamping (ICC). This topic is significant because there is potential evidence that preterm neonates can have improved health outcomes from a change in practice as minimal as a provider waiting to clamp the umbilical cord (Aliyev & Gallo, 2018).

Article Summary

Introduction

The article discussed is “Implementation of Delayed Cord Clamping in Vigorous Preterm Neonates” (Aliyev & Gallo, 2018). The article discusses the implementation of delayed cord clamping (DCC), which is considered nontypical, compared to that of immediate cord clamping (ICC), which is regarded as standard practice after a neonate is born. Researchers aim to discover evidence that DCC is more beneficial to preterm neonates than ICC. Researchers accomplished this by studying neonates born before 37 weeks gestation. Researchers wanted nurses to implement DCC instead of the usual ICC. Nurses clamped the umbilical cord at least one minute

after birth. After researchers analyzed the data, the data showed that the Apgar scores in neonates with DCC were higher than those with ICC. The researchers then had the nurses clamp umbilical cords five minutes after birth, and data showed that the Apgar scores for the DCC neonates were higher than ICC neonates. It is vital to research information to improve patients' lives by providing the most effective care possible in nursing practice. The topic of improving the quality of preterm neonate care is relevant when implementing DCC instead of ICC. This practice is something a nurse or provider can quickly implement to improve the life of preterm neonates (Aliyev & Gallo, 2018).

Overview

This research article relates to improving the quality of preterm neonate care by exploring the Apgar scores of premature neonates who had ICC and those who had DCC. The Apgar scores demonstrate hemodynamic strength, and all neonates receive the score at birth regardless of gestational age. These Apgar scores were collected and scored and then compared. Other outcomes were measured, such as the qualities of the obstetrics team and the degree of clamping. The researchers in the article also developed a survey in which the obstetrics team could respond to questions about DCC implementation. When it comes to the QSEN competencies of quality improvement, this article examines the tactics for change in the processes of preterm neonatal care. In this research, knowledge was reviewed and then presented to the implementation team of nurses and physicians—this knowledge allowed for a change in the process of preterm neonatal care directly after birth. The obstetrics team was then able to change an aspect of a skill they participate in daily. Instead of clamping the cord immediately, they delayed it in some neonates for one minute and five minutes for other neonates. The health care providers' attitude also helped to make a change in quality improvement for the neonates. The obstetrics team showed a

professional attitude when implementing DCC and was aware of potential benefits to their patients. Most nurses surveyed in this study felt that this change is appropriate in improving neonatal care (Aliyev & Gallo, 2018).

Quality Improvement

The implementation of delayed cord clamping (DCC) can occur in care settings that manage the birthing process. These settings involve women's centers engaging with the obstetrics department. Healthcare workers, including advanced life support nurses, also aid the operating room and labor and delivery. If the change from immediate cord clamping (ICC) to DCC is to occur as standard practice, time is the resource needed to be available for implementation. When it comes to pre-implementation, a nurse should make sure that the patient giving birth knows about DCC, and when it comes to post-implementation, the nurse should record the Apgar scores and assess the patient. Financially, there is no additional cost apart from the cost of labor and delivery and neonatal care. Cord clamping is part of the labor and delivery costs, so waiting a specified amount of time would not affect the financial aspect of the procedure. In the long run, implementing DCC may reduce health care costs due to its effect on Apgar scores. Therefore, DCC implementation can potentially lower healthcare costs for the future due to decreasing the need for additional healthcare treatments and future hospitalizations, which can be costly. However, when it comes to the cost to the hospital, educating staff members about the latest clinical practices relating to DCC could potentially incur additional costs (Aliyev & Gallo, 2018).

Additionally, the increase in Apgar scores can also affect patient satisfaction. The satisfaction of the neonate and their parents likely increased because of assurance in hemodynamic stability. When it comes to the satisfaction of the nurses implementing this

change, after post-implementation of DCC, 92% of the nurses felt that DCC was an appropriate change in the healthcare center that they worked, suggesting that they were pleased with the outcome of the quality improvement implementation. DCC implementation also increases patient safety. It increases Apgar scores linked with decreased health risks for the neonate, resulting in fewer hospitalizations and long-term health benefits. Implementation of DCC could increase nurse safety because if the neonate is healthier due to the hemodynamic stability at birth, there could be less need for potentially harmful medical implementations such as lab draws or needlesticks (Aliyev & Gallo, 2018).

Application to Nursing

Practice

The best nursing practice to improve the health outcomes of preterm neonates is the implementation of delayed cord clamping (DCC) by waiting for one to five minutes after birth to apply cord clamping procedures. The best way to ensure preterm neonates receive the best quality care relating to DCC is advocating from practicing nursing for protocols associated with DCC implementation instead of immediate cord clamping (ICC). In nursing practice, using the evidence-based information available about DCC is vital. Nurses must facilitate specific protocols related to the timing of cord clamping to ensure improved Apgar scores in preterm neonates and ensure patients are receiving the best nursing care (Aliyev & Gallo, 2018). When inquiring about the implementation of DCC in obstetrics as a whole, researchers discovered that after vaginal births of full-term infants, DCC implementation accounted for 67% of the time. When it came to preterm neonates, DCC implementation accounted for more than 70% of the time. However, researchers determined that compliance of implementation of DCC relied heavily on the healthcare institutions' protocols and policies (Leslie et al., 2017). Researchers

discovered that registered nurses led the most push for change when implementing the transition from ICC to DCC. It is not only the best practice to implement DCC procedures, but it is also imperative that registered nurses advocate for DCC protocols in healthcare institutions to ensure that their patients receive quality care in nursing practice (Aliyev & Gallo, 2018).

Education

Researchers learned that there were minimal guidelines for staff education about implementing delayed cord clamping (DCC). Compliance is not solely a regional issue; this is an issue nationwide. Information is available from the American College of Obstetricians, the International Liaison Committee on Resuscitation, and the World Health Organization that acknowledges and promotes implementing DCC. However, although information is available proving the benefits of DCC, it is still ingrained in many healthcare providers' minds that immediate cord clamping (ICC) is the best practice. This belief is due to the idea that it reduces blood loss after birth. This information is outdated and, according to researchers, can lead to patient harm. ICC can lead to hypovolemia, low hematocrit levels, and low blood and arterial pressure levels in neonates. Researchers aimed to understand healthcare opinions about DCC and developed a survey to obstetrics care workers. The results show that more than 85% of healthcare workers surveyed had heard about the benefits of using DCC for preterm neonates before implementing DCC. However, only about 28% admitted to implementing DCC regarding evidence-based practice. This evidence suggests that overall, healthcare workers are aware that there are some benefits to implementing DCC. However, hospital institutions provide few guidelines on implementing current research to better patient outcomes (Aliyev & Gallo, 2018).

Research

From a clinical nursing perspective, the priority for further study is to find ways to improve preterm neonatal delayed cord clamping (DCC) and assess whether more time should be allocated before cord clamping to provide more benefits to preterm neonates. DCC implementation ranges from one to five minutes; however, more research may be necessary to evaluate DCC patients implemented after five minutes. It may be beneficial to study whether or not preterm neonates have increased Apgar scores when DCC implementation occurs after five minutes compared to the neonates who have DCC from one to five minutes (Leslie et al., 2017). It may also benefit more research relating to implementation barriers such as neonates that need resuscitation, neonates born in emergencies, and studies relating to neonates of all gestational ages, not just preterm. It is essential for nurses who work with neonates to further research for their patients to have the most effective, beneficial, and quality care. In a clinical setting, a nurse or other healthcare providers need to know the most up-to-date information relating to clinical practice to provide adequate healthcare and prevent more minor complications that can affect the patient's quality and quantity of life (Aliyev & Gallo, 2018).

Conclusion

Quality improvement serves a purpose of significance regarding healthcare providers' knowledge, skills, and attitudes. Quality improvement seeks to improve the outcome of nursing practice by applying researched data to modernize nursing practices and implementations with an overall goal for healthcare improvement (Houser, 2018). The quality improvement provides the opportunity for nurses to utilize their expertise to innovate procedures and improve the implementation of care. Nurses must apply their skills and modify their clinical practice. Based on current research of best practices, improvements in healthcare can produce feelings of validation regarding nurses and their role in healthcare (QSEN Institute, 2020). This research

topic is about bettering the life of preterm neonates, centering on the implementation of delayed cord clamping (DCC) instead of implementing immediate cord clamping (ICC). Studies have shown significant benefits and improved Apgar scores for neonates who have had this change in implementation. Nurses in this study understood potential benefits to DCC implementation and adjusted this change in nursing practice by ensuring physicians and healthcare providers adhere to the DCC protocol. In turn, most nurses felt that this change was beneficial to their neonatal patients. This change in practice is significant because there is proven data that preterm neonates have better health outcomes related to a transition to DCC. This practice is as minimal as a healthcare practitioner prolonging the clamping of the umbilical cord and has numerous health benefits that enhance the quality of life (Aliyev & Gallo, 2018).

References

Aliyev, G., & Gallo, A.M. (2018). Implementation of delayed cord clamping in vigorous preterm neonates. *Journal of Obstetric, Gynecologic, and Neonatal Nursing, 47*(6), 803-811. https://doi.org/10.1016/j.jogn.2018.09.003

Houser, J. (2018). *Nursing research: Reading, using, and creating evidence* (4th ed.). Jones & Bartlett Learning.

Leslie, M. S., Greene, J., Schulkin, J., & Jelin, A. C. (2017). Umbilical cord clamping practices of U.S. obstetricians. *Journal of Neonatal-Perinatal Medicine*, *11*(1), 51–60. https://doi.org/10.3233/NPM-181729

QSEN Institute. (2020). *QSEN Competencies*. https://qsen.org/competencies/pre-licensure-ksas/#quality_improvement