Purpose:

Most severe neonates demonstrate poor condition such as respiratory distress syndrome, intraventricular hemorrhage, heart disease, necrotizing enterocolitis after birth. In order to improve the evaluation of survival rate, a medical team is required to draw blood several times to conduct laboratory evaluation for disease diagnosis and surveillance therefore the laboratory data are critical care for ill patients. However, it is adverse the small blood vessels to collect blood for critical neonates and premature infants who are at the high risk of anemia due to underdeveloped hematopoietic systems and increase the requirement of blood transfusion, the number of puncture times and the amount of blood loss from laboratory diagnostic would increase. This project aims to leverage Point-of-Care (POCT) to reduce critical neonate’ blood loss during laboratory test.

Methods:

The phlebotomists choose the one of three way of venous, arterial and atrial line to collect the blood samples to determine by the medical team suggestion. The findings from cross-sectional study: Small and fragile vessels of patient; poor techniques, inexperience, and poor feeling of phlebotomists; inadequate blood collection needles applied for vessels of newborns or premature infants would bring about an increase number of puncture times during phlebotomy and lead to the additional amount of blood loss. After literature reviews and discussions, solutions proposed are as follows: 1. Organize educational training of Point-of-Care Testing for nursing personnel. 2. Amend “Point-of-Care Workflow” and add graphic illustration. 3. Draw up an audit scheme and conduct.

Results:

After the improvement scheme was implemented, the critical neonates’ blood loss from laboratory diagnostic within 7 days reduced from 10ml to 4.62ml. 2. The increase of puncture time lowered from 68.8% to 16.3%.

Conclusion:

The above results revealed that the improvement scheme of this project could effectively achieve the goal of improvement. It is anticipated to maintain the safety of neonates and raise care quality through the results of this project.
Keywords:
Neonatal, Intensive care unit. and Point-of-Care-blood test

References:


Abstract Summary:
Most severe neonates demonstrate poor condition after birth. In order to elevate survival rate, a medical team need to conduct laboratory evaluation for disease diagnosis and surveillance.

**Content Outline:**

**Introduction:** To aims for leverage Point-of-Care Testing (POCT) to reduce critical neonates’ blood loss during laboratory test.

**Main Point:** The following solution is 1. Organize educational training of POCT for nursing personnel; 2. Amend “Point-of-Care Workflow” and add graphic illustration; and 3. Draw up an audit scheme and implement it.

**Conclusion:** The scheme could effectively achieve the goal of improvement, maintain the safety of neonatal and enhance the quality of care.

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