

Development and Implementation of a Neonatal Massive Transfusion Protocol

A Quality Improvement Project

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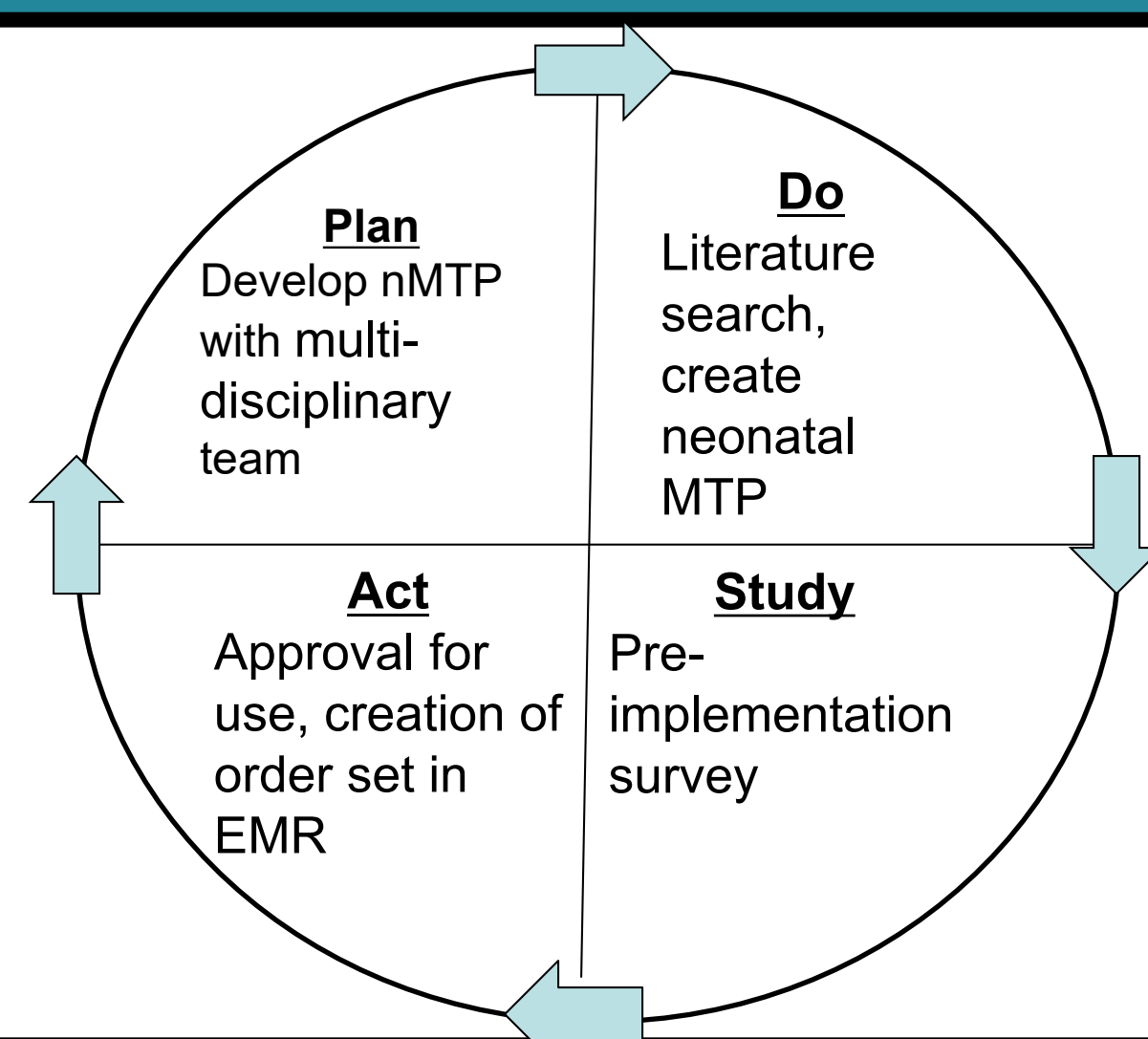
QUALITY PROBLEM

- The Massive Transfusion Protocol (MTP) is an institutional plan designed to facilitate communication, timely lab monitoring, and reduce delays/errors when ordering and administering blood products.
- Evidenced-based guidelines for neonatal MTPs are lacking due to limited data and rare use in NICUs.
- Pediatric MTPs do exist but are not suitable for neonatal population as quantities of blood products typically larger

SETTING AND TEAM

This QI project was conducted in the NICU at UNMH. It included NICU clinical staff and faculty as well as faculty from the Transfusion Medicine Division.

QI Framework



QI Project Aim

Create a standardized process for ordering and transfusing multiple blood products to infants and neonates with active bleeding or hypovolemic shock.

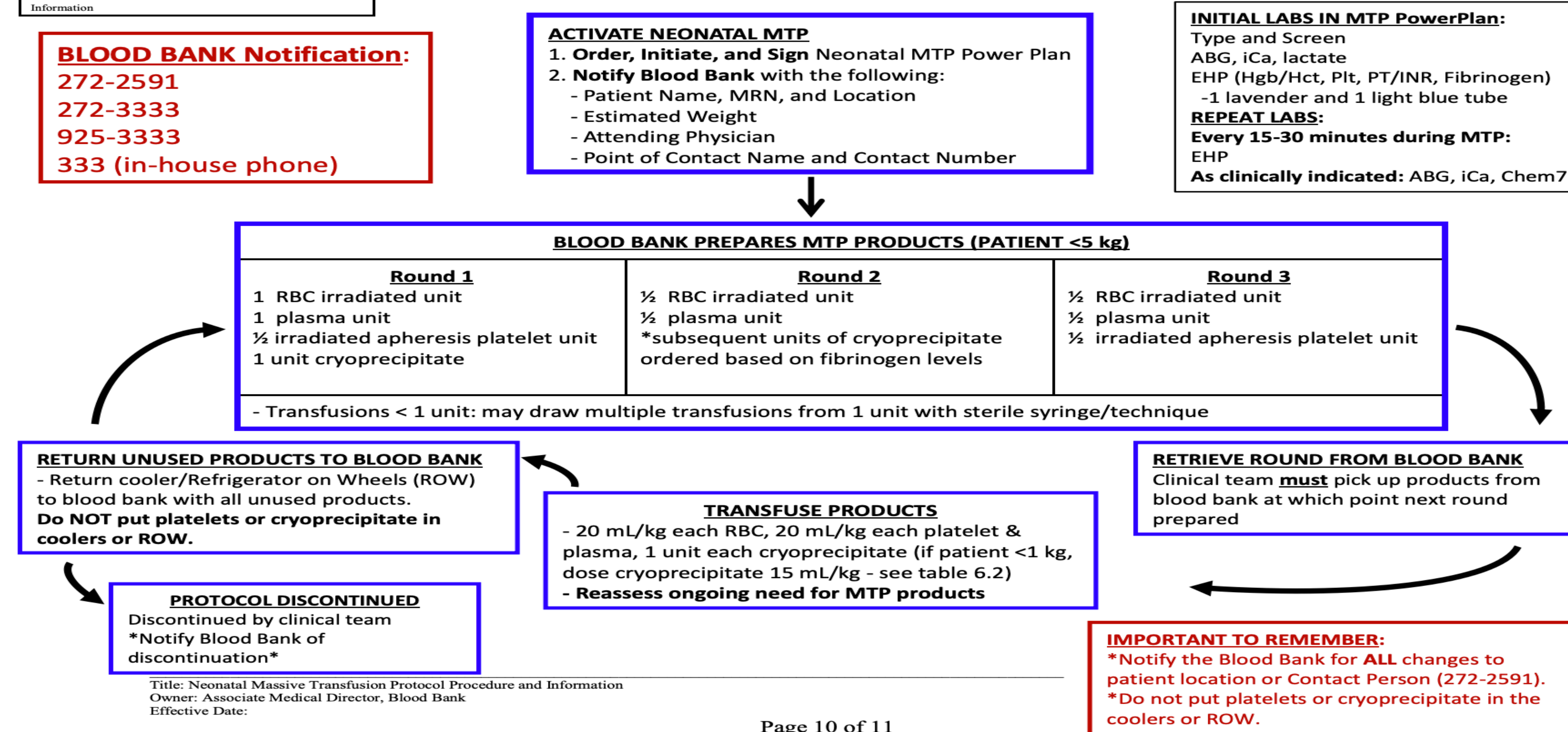
QI Project Measures

Use of the neonatal MTP within the Children's Hospital at UNMH.

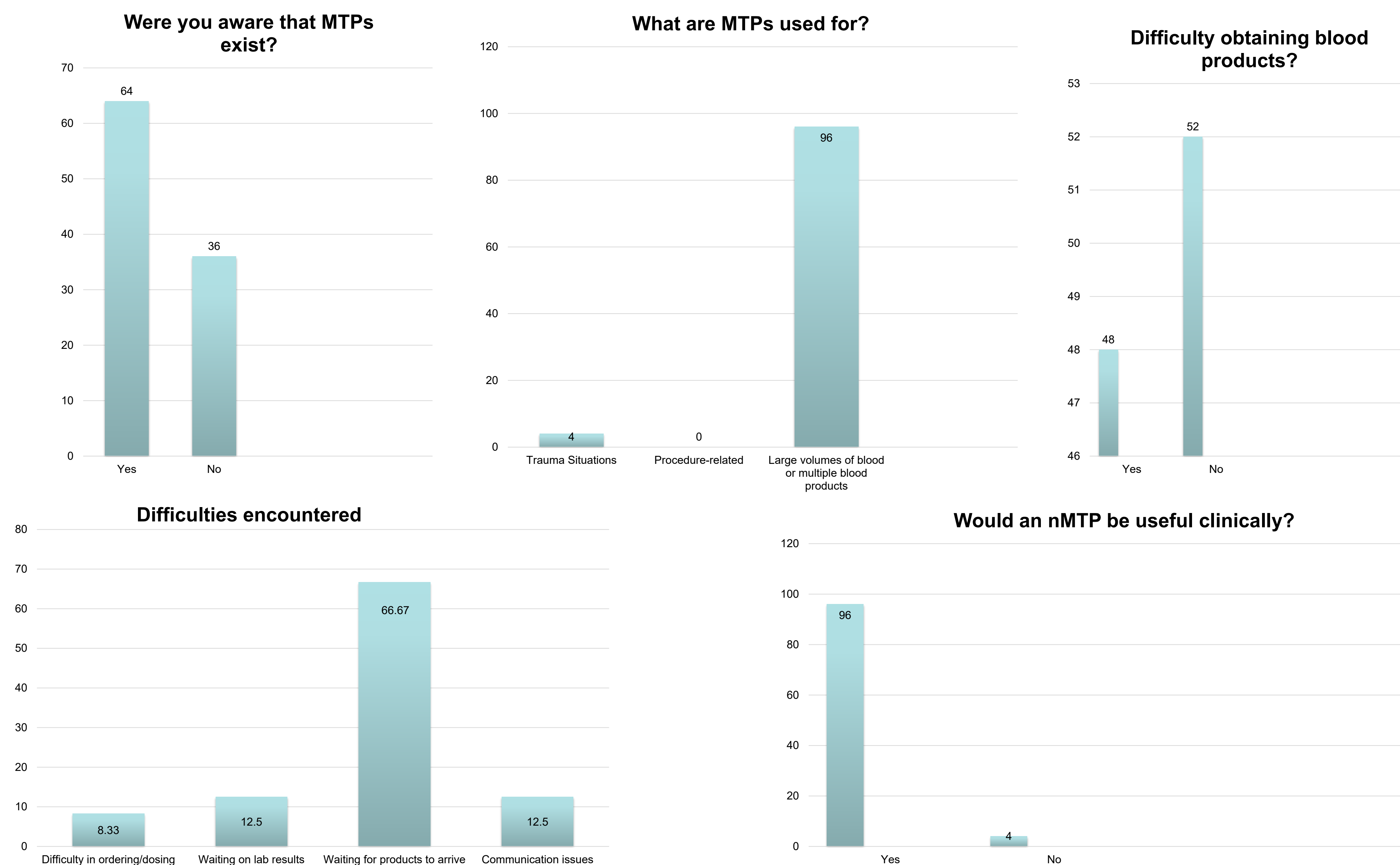
Title: Neonatal Massive Transfusion Protocol	Effective Date:
Applicability: UNM University Hospital Neonatal Patients	Document Owner: Transfusion Medicine
Related Documents: Neonatal Massive Transfusion Protocol (MTP) Procedure and Information	

BLOOD BANK Notification:
 272-2591
 272-3333
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Neonatal Massive Transfusion Protocol



SELECTION OF CHANGES TO TEST



PDSAs

PDSA focus	# of Cycles	Outcome
Plan	1	1. Work with a multi-disciplinary team to develop a neonatal MTP including clinical staff in the NICU, Transfusion Medicine, UNMH transfusion committee, and another large children's hospital- completed
Do	1	1. Literature search to obtain background information on neonatal MTPs- completed 2. Creation of a neonatal-specific MTP- completed
Study	1	1. Pre-implementation survey sent out to physicians, nurse practitioners, physician assistants, and nurses in the NICU- completed, see graphs above
Act	1	1. Obtained approval for use within the Children's Hospital- completed 2. Creation of order set in the hospital's electronic medical record system- in process

SUMMARY

Our multi-disciplinary group collectively developed a neonatal-specific MTP to allow for a safer, timelier, and standardized approach to administering multiple blood products. Massive transfusions are rare but high-risk events in the NICU setting thus this study will hopefully improve patient outcomes related to transfusions. Our pre-implementation survey shows educational and practical barriers exist when attempting to order multiple blood products and further work will need to be done to address these barriers.

NEXT STEPS

In future PDSA cycles, we plan to institute a neonatal-specific MTP power order set to address current barriers, complete mock codes within the NICU as well as offer educational videos.

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REFERENCES

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