Wake Forest Baptist Medical Center	Pregnancy Protocols BB.P.1047.1	Dept:	324311
		Dept Name	Blood Bank
		Effective Date:	
		Revised Date:	
Name & Title: CLIA Laboratory Medical Director		Contact:	JHSimmons/ CSWarren
Signature:		Date:	

1. General Procedure Statement:

A. Purpose:

Routine delivery of infants will occur at Wake Forest Baptist Medical Center effective July 1, 2019. There are times when mother or fetus are considered at high risk and the delivery may be scheduled or occur emergently at Wake Forest Baptist Medical Center. Testing of cord blood samples following delivery may be problematic depending on sample collection. The following guidelines/procedure will give direction to the technologist in testing and interpretation of testing during these deliveries.

B. Responsible Department/Scope:

i. Policy owner/Implementer: Julie H. Simmons/Christina S. Warren
ii. Policy prepared by: Julie H. Simmons
iii. Who performs policy: Department staff/management

C. Definitions

Wharton's Jelly: Gelatinous substance that protects the umbilical cord from collapsing, gives it an elastic and cushion affect

Cord blood: Specimen collected from the umbilical cord at birth

HDFN: Hemolytic Disease of the Fetus and Newborn

TSXN: Type/Screen Neonate

SCC: Soft Computer Consultant, Blood Bank computer system

OB: Obstetrics- a branch of medical science that deals with pregnancy, childbirth, and the postpartum period

MOH: Massive Obstetrical Hemorrhage Protocol

Round 1: 4 RBCs + 4 plasmas from remote fridge
Round 2: 4 RBCs + 4 plasmas + 1 platelet + 1 cryo pack (5)
Round 3: 4 RBCs + 4 plasmas + 1 platelet
Round 4: 4 RBCs + 4 plasmas + 1 platelet + 1 cryo pack (5)

WO: Wake One (Epic, hospital information system)

MVA: Motor Vehicle Accident

DAT: Direct Antiglobulin Test

D. Sections: NA

E. Protocols:

1.0 Any notification concerning high risk OB patient, notify management and medical director.

2.0 Obstetric patients may require massive transfusion. The MOH protocol may be utilized in these circumstances. Refer to Protocols:

Emergency Blood Protocols, BB.Protocol.1041
Massive Obstetrics Hemorrhage Transfusion Protocol

3.0 Cord blood specimens may be collected at delivery and sent for forward ABO/RH testing and DAT testing. Reverse group testing is not performed on cord blood samples.

4.0 Infants will be registered at birth and cord specimen will be labeled with infant's label.

4.1 If infant not registered at birth, perform testing using downtime procedures until neonate is admitted.

4.2 The routine test name for cord blood: CORDP (Cord Blood Evaluation)

5.0 If unable to determine the ABORh on the cord blood specimen:

5.1 Cord blood samples may be contaminated with Wharton's Jelly and must be washed thoroughly (≥6 times) to remove it and get an accurate typing.

a. If the cord specimen becomes contaminated with Wharton's jelly, then non-specific agglutination of the red cells (false positives) can occur.

b. False positive reactions are usually discovered when the ABO/D typing is performed and all forward reactions are positive.

5.2 When testing using cord specimens, reactions should be checked microscopically for mixed field in the forward typing.

5.3 Cancel test as contaminated. **Do Not** request a heel stick **unless** the mother is Rh negative/unknown. See next step, 6.1.

6.0 If the sample is rejected due to mislabeling or other reason:

6.1 Only order a heel stick when:

a. Mother is Rh negative or Rh unknown

- Mother's name/MRN should be printed on the cord blood requisition

6.2 Do Not request a heel stick if the mother is Rh Positive.

a. We are ONLY to ask for a heel stick if it impacts the mother's treatment (i.e. potential RHIG candidate)

6.3 Consult management before requesting a heel stick for any reason other than the reason above, see step 6.1.

7.0 DAT testing is performed, to rule out potential hemolytic disease of the fetus and newborn due to antibodies produced by the mother.

7.1 HDFN may be due to maternal ABO or IgG allo antibodies.

7.2 Red cell transfusion must lack the antigen to the antibody as long as the antibody is detectable in the infant's plasma.

8.0 The ABO/Rh of the neonate is used to select product for transfusion and to evaluate the mother's need for Rh Immune globulin.

9.0 Rh negative women who deliver Rh positive or Rh unknown infants should receive Rh Immune globulin.

9.1 The delivering physician is responsible for requesting appropriate testing and obtaining Rh Immune globulin on women who deliver at Wake Forest Baptist Medical Center.

9.2 A maternal sample (Rh negative women) should be obtained within an hour of delivery and tested for massive fetomaternal hemorrhage.

a. The WO order, RHIG Candidacy Workup, will be ordered by provider,

b. Tests included are: mother's ABO, RH, weak D, infant's ABO, RH, weak D if applicable, FBS (rosette test), and determination if mother is a candidate.

c. If the infant's Rh cannot be determined or there is no sample:

a. A sample was not collected- have a sample collected- see step 6.1

b. A sample cannot be collected- infant is still born- the Rh negative mother is resulted as being a RHIG candidate.

d. If the infant is Rh negative a RHIG candidacy workup still needs to be resulted to document that the Rh negative mother has been investigated and determined to not be a candidate.

i. Refer to procedure *RhIG Candidacy Test,BB.Routine.1067.*

9.3 Hematology-Flow cytology performs Fetal Hemoglobin testing by flow cytometry at Wake Forest Baptist Medical Center. This test will report the mLs of feto-maternal bleed and the recommended dosage of RHIG to cover the bleed.

a. Refer to procedure *FMH Rapid Screen (Fetal Maternal Bleed Screen), BB.Routine.1066*

9.4 The provider will need to order RHIG from Pharmacy

a. Pharmacy dispenses Rh Immune globulin at Wake Forest Baptist Medical Center.

10.0 OB patients- Type and Screens with a historical antibody and a positive antibody screen:

10.1 Perform a selected screen to rule out all other clinically significant antibodies and perform titer of antibody when:

a. Patient is not here to deliver (pre-eclampsia, vaginal bleeding, gestation is less than 37 weeks and labor is not being induced or C-section, trauma (i.e. MVA))

10.2 Perform extended 3 cell screen and if pattern matches antibody history there is no more testing.

a. Patient is here to deliver (usually 37 weeks or more gestation)

b. Refer to *Antibody Identification Protocols, BB.Protocols.1031*

10.3 If unsure of the patient's reason for the TSX consult management.

4. Review/Revised/implemented:

All procedures must be reviewed according to Document Control Protocol.
All new procedures and procedures that have major revisions must be signed by the CLIA Director.
All reviewed procedures and procedures with minor revisions can be signed by the designated section medical director or designee.

5. Related Policies/Procedures:

RhIG Candidacy Test, BB.Routine.1067
FMH Rapid Screen (Fetal Maternal Bleed Screen), BB.Routine.1066
Emergency Blood Protocols, BB.Protocol.1041
Massive Obstetrics Hemorrhage Transfusion Protocol, intranet

6. References:

AABB Technical Manual, revised periodically

7. Attachments: NA

8. Revised/Reviewed Dates and Signatures:

See Document Change Control

Document Change Control			
Title: Pregnancy Protocols			
Previous title: Delivery of High Risk Pregnancies Protocols			
Written date	3/7/17	Written by:	JH Simmons
Validation date	3/17/17	Validation by	B.Turner
Reviewed date	3/14/17	Reviewed by	mjones
Approved date	3/14/17	Approved by	E. Fadeyi
Approved date		Approved by	
Effective date in use	3/16/17	In use by	j.Simmons

Revisions

Revised Date	By	MD Date	By	MD Date	By	Review Date	By	Effective Date	By
12/26/19	JJ			12/27/19		12-27-19		1-6-2020	

Validate Date	By	Revisions
12-27-19		Revisions: name of procedure changed, removed "Delivery of High Risk". Deliveries are routine now. 2.0 MOH protocol added Definitions: MOH, WO, OB (added more to existing definition) 4.0 Infant registration, 5.3- added steps on whether recollect or cancel CORDP testing. 9.0 RHIG candidacy Workup order, if no baby RH then mom is RHIG candidate, Fetal hemoglobin by flow cytometry, RHIG obtained in Pharmacy, Rh neg mom with Rh neg baby still needs RHIGW test. No heel sticks unless mom is Rh negative.

Revised Date	By	MD Date	By	MD Date	By	Review Date	By	Effective Date	By

Validate Date	By	Revisions:

Revised Date	By	MD Date	By	MD Date	By	Review Date	By	Effective Date	By

Validate Date	By	Revisions:

Revised Date	By	MD Date	By	MD Date	By	Review Date	By	Effective Date	By

Validate Date	By

Locations		Out of Use: Date:		By	
		Reason			

Reviews: Record Date/Initials

Date	Initials	Date	Initials	Date	Initials	Date	Initials
11/24/17	JHS						
3/26/19	MRJ						