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Review of the Obstetrical Delivery Log - Royal Oak Blood Bank

Document Type: Procedure

I. PURPOSE AND OBJECTIVE:

The purpose of this document is to provide policies and procedures for reviewing the *Obstetrical Delivery Log*. The purpose of this log is to facilitate compliance with the Transfusion Medicine Policies for each obstetric patient who delivers at this facility; most importantly, that Rh Immune Globulin (RhIG) is administered and is administered in the correct dose, when indicated.

II. SCOPE:

A. The *Obstetrical Delivery Log* is used when evaluating postpartum patients who deliver in the Family Birth Center (FBC) for RhIG.

III. INTRODUCTION:

A. The *Obstetrical Delivery Log* is initiated daily by the FBC. The FBC documents the delivery date at the top of the log. For each delivery, the FBC will document the time of delivery, the mother's name, medical record number (MRN), whether a cord blood specimen was collected, and the mother's ABO/Rh type. The FBC should make a separate entry for each birth (multiple entries are made for obstetric patients of multiples), and an entry should also be made for deliveries that do not result in a live birth. The FBC should collect a cord blood specimen if the chart indicates that the mother is Rh negative, or if the Blood Bank calls the FBC to ask for a cord blood. The FBC should send the documented log to the Blood Bank by 8 am the following day.

B. The log will be competed each day by the Blood Bank as described in the Procedure section of this document. The documentation of this log will facilitate compliance with the following

policies:

1. Transfusion Medicine policy, *Rh Immune Globulin Evaluation.*
2. Transfusion Medicine policy, *Hemolytic Disease of the Newborn Survey.*
3. Crossmatching for babies when the obstetric patient has unexpected antibodies; refer to Transfusion Medicine policy, *Newborn Compatibility Testing Guidelines*.

IV. DEFINITIONS AND ACRONYMS:

A. **Delivery**: As used in this document the term refers to the cessation of all pregnancies greater than 18 weeks gestation including full-term births and pregnancies that are terminated or interrupted for any reason.

B. **Designee**: The Blood Bank Fellow.

C. **HDN**: Also referred to as HDFN (Hemolytic Disease of the Fetus / Newborn). The destruction of fetal or newborn red blood cells by maternal alloantibodies specific for inherited paternal red cell antigens.

D. **Unexpected antibodies**: Any antibody (other than naturally occurring anti-A or anti-B that is regularly found in normal serum or plasma) that is currently or was historically present in a patient's sample.

E. **FMH**: Refers to the RBC fetal assay; the quantitative feto-maternal hemorrhage test that is performed in the flow cytometry laboratory at BH-Royal Oak.

F. **FCS**: Fetal Cell Screen.

G. **MAB**: Maternal Antibody.

H. **NEXM**: Not Eligible for Electronic Crossmatch.

V. POLICIES:

A. The FBC Charge Nurse shall be called to request cord blood collection from an obstetrical patient who is likely to deliver if they have a positive antibody screen or a history of unexpected antibodies, or if the mother is weak D positive.

B. Any information documented on the *Obstetrical Delivery Log* by the FBC that appears to be inaccurate or incomplete must be investigated and corrected before proceeding. Corrections to the Log may be made by one of the following methods:

1. The technologist may correct the information after verbally confirming the information and documenting the ID number of the employee that it was confirmed with, or
2. A photocopy of the delivery log may be corrected by an employee in the FBC and attached to the original copy of the *Obstetrical Delivery Log*.

A. If the Maternal ABO/Rh Documented on the Log by the FBC Does Not Match the ABO/Rh in the Computer

1. Have the *Obstetrical Delivery Log* corrected by one of the methods listed above.

2. If the FBC thinks the ABO/Rh of the patient in the Blood Bank computer system is incorrect or does not match the patient's chart, do not assume that they are incorrect. Order a new Type and Screen. Investigate the cause of the discrepancy and take appropriate actions. For example:
    a. Document a variance.
    b. If applicable, refer to Transfusion Medicine policy, Resolution of ABO and Rh Discrepancies
    c. Consider the possibility of a WBIT (Wrong Blood in Tube Event).

B. RhIG Should be Administered Within 72 Hours from Delivery

1. Postpartum RhIG administration should occur within 72 hours from delivery, or as soon as possible after delivery. For additional information, refer to Transfusion Medicine policy, *Rh Immune Globulin Evaluation*.

C. Locations of Documents / RhIG Binder

1. The RhIG shelf at the Triage workstation is used to temporarily store *RhIG Control Forms* as they are returned, shingles for RhIG Evaluations, RhIG Evaluation Forms, orders for patients with pending FCS or FMH tests, etc. The day shift technologist assigned to the RhIG station will retrieve these documents at the beginning of the shift.
2. After all required RhIG vials are prepared, the patient's RhIG evaluation paperwork and order shingles may be discarded. If the first vial of RhIG is prepared but the FMH is still pending, return the paperwork to the RhIG shelf at Triage (do not discard until the FMH has been completed).
    a. Documented *RhIG Control Forms* will be affixed to the dispense form and computer generated RhIG paperwork for the patient, and filed at the clerk's desk.

    The RhIG binder is located at the Rounds area and contains the following documents:
    a. *Obstetrical Delivery Log*, for the current and previous months
    b. *FMH or RhIG Injection Pending* stickers
    c. *Supplemental Obstetrical Delivery Log*

D. Responsibilities Relating to the Obstetrical Delivery Log

1. The **FBC** documents the delivery date at the top of the log, records all deliveries for that date, and sends the log to the Blood Bank by 8 am the next day.
2. **Medical Technologist Review (deliveries that occurred on the previous day)**: On the current day, the technologist assigned to the RhIG workstation will document the log corresponding to all deliveries that occurred on the previous day as described in the *Procedure* section of this document. For example:

a. On April 16th the technologist assigned to the RhIG workstation will document the log for all deliveries that occured on April 15th.

3. **Review 2 Days Post Delivery**: Two days after the delivery date, a final review of each woman who is Rh negative, weak D positive, RND (Rh not determined), has a positive antibody screen, or has a history of unexpected antibodies is performed to verify that all required steps of the *Procedure* have been completed and that the log has been documented correctly. This final review is performed by the technologist assigned to the crossmatch workstation.
    1. This technologist will document the "Review 2 Days Post Delivery" column of the applicable log only if all required steps of the *Procedure* have been completed.
    2. If all required steps of the *Procedure* have NOT been completed, the "Review 2 Days Post Delivery" column must NOT be documented. The technologist must follow up with the steps that have not been completed.
        a. If the steps that have not been completed relate to the completion of an FMH or confirmation of RhIG injection, an *FMH or RhIG Injection Pending* sticker will be affixed to the *Communication Log*. This sticker will serve as a reminder to the Blood Bank to follow up on this patient, to verify that RhIG is administered within 72 hours from the delivery.
        b. If the steps of the *Procedure* cannot be completed, a variance should be submitted.

    Examples:

        a. The current date is April 16th; the technologist assigned to the crossmatch workstation will document the April 15th log (for all deliveries that occured on April 15th). In addition, this technologist will make a final review of the April 14th log. This "Review 2 Days Post Deliver" of the April 14th log is performed only for mothers who were documented as Rh negative, weak D positive, RND, has a positive antibody screen, or has a history of unexpected antibodies.
            i. If all required steps of the Procedure have been completed on the April 14th log for each woman who is Rh negative, weak D positive, RND, has a positive antibody screen, or has a history of unexpected antibodies, the "Review 2 Days Post Delivery" column is documented on April 16th.
            ii. RhIG was indicated for a mother on the April 14th log and was issued, but the Blood Bank still has not received documentation that it was injected (*RhIG Control Form* has not yet been returned, and there is no documentation in EPIC to verify the RhIG injection). The "Review 2 Days Post Delivery" column should NOT be documented for this mother at this time. The technologist calls the nurse to request the return of the *RhIG Control Form*, and then affixes an *FMH or RhIG Injection Pending* sticker to the April 14th delivery log and to the *Communication Log*. On April 17th, the *RhIG Control Form* is returned and the "Review 2 Days Post Delivery" column is documented.

4. A **technologist** will verify that the total number of RhIG vials that are indicated on the log have been injected (and not merely dispensed). The *RhIG Control Form* should be initials by the nurse who injects the RhIG and should be returned to the Blood Bank. The return of this form, initialed by the nurse, indicates that the RhIG has been injected. If the *RhIG Control Form* is not returned to the Blood Bank, verification of RhIG injection may be accessible in EPIC. Refer to the Blood Bank CDM - Viewing Documentation of Rhogam (RhIG) Injection in EPIC.
5. **MD Review**: The Blood Bank Medical Director or designee will review the delivery logs to verify that the correct dose of RhIG was prepared for each mother who, as indicated by the Blood Bank on the log, is a RhIG candidate.

E. Use of the Optional Supplemental Obstetrical Delivery Log

1. RhIG samples are usually evaluated the day after delivery so that it is assessed the same day the log is received from the FBC. However, if a RhIG sample is received the same day of delivery, the RhIG evaluation may also be performed on the day of delivery, even though the Blood Bank has not yet received the log for the patient from the FBC. In these cases the technologist may, at their discretion, use the *Supplemental Obstetrical Delivery Log*.
    a. The supplemental log is intended to assist the technologist who is preparing RhIG for a mother whose RhIG sample is received on the same day of delivery, because the technologist does not have the benefit of using the normal *Obstetrical Delivery Log*. Although the supplemental log is intended to assist the technologist, use of it is not mandatory.
    b. These supplemental logs are maintained in the RhIG binder.
    c. Even if the supplemental log may be used, the normal *Obstetrical Delivery Log* must still be documented for this patient after it is sent to the Blood Bank. The supplemental log should be stapled to the normal *Obstetrical Delivery Log* containing the patient.
2. The *Supplemental Obstetrical Delivery Log* may also be used to document RhIG evaluations for patients who did not deliver at Beaumont Royal Oak if they are not documented at the bottom of the *Obstetrical Delivery Log*.

F. Use of the FMH or RhIG Injection Pending Sticker

1. RhIG administration should occur within 72 hours from delivery. To facilitate Blood Bank communications over several shifts, the *FMH or RhIG Injection Pending* sticker is documented and affixed to the *Communication Log*. This sticker is used if, for example:
    1. A sample was sent to flow cytometry or hematology and the FMH is pending.
    2. For the "Review 2 Days Post Delivery" the Blood Bank still has not received documentation that RhIG was injected.
    3. The floor has not requested the RhIG in a timely manner; it has not been issued.
2. The sticker will serve as a reminder to the Blood Bank to follow up on this patient, to verify that RhIG is administered within 72 hours from the delivery.

VI. PROCEDURE:

The FBC documents the delivery date at the top of the log, records all deliveries for that date, and sends the log to the Blood Bank by 8 am the next day.

A. Initial and date in the space provided at the bottom of the log.
    1. Each day, the Medical Technologist assigned to the crossmatch workstation will document the log for deliveries that occurred on the previous day, as described in the following steps.

B. Access the patient's record in the Blood Bank computer system, using the mother's MRN that was documented on the log by the FBC. Verify the spelling of the patient's name and the patient's MRN are documented correctly.

C. Verify that the maternal ABO/Rh as documented by the FBC matches the ABO/Rh from the computer. Document the log with a check mark to indicate that the ABO and Rh types match.

D. Document the log with a check mark to indicate that a Type and Screen has been performed on a *current* maternal sample.
    1. The Type and Screen should be current on the day of delivery. It is not required that the Type and Screen is still current when the delivery log is reviewed the following day.

E. Determine whether the mother has a current or historical antibody record. If the mother has an antibody, document the antibody specificity on the log, in the space provided.
    1. If anti-D was historically or currently identified, remember to consult the Medical Director.

F. Perform the following steps if the mother has a positive screen or a historical antibody record. If not, proceed to step G.
    1. Document the "HDN Survey Performed" column with a check mark to indicate the survey has been initialed, or as "NI" (not indicated).
    2. Document the "MAB, NEXM, and Antibody" column with a check mark to indicate that the MAB special message has been added, that the NEXM antibody has been added, and that the specificity of the maternal antibody has been added to the baby's record.
    3. Document the log with a check mark or "NI" to indicate that a unit has been crossmatched for the baby.
    4. Document the neonate's MRN in the space provided. The neonate's MRN may be obtained from the maternal "patient profile with MRI" in EPIC; be careful to obtain the MRN for the correct baby (with the correct birthdate).
        a. For multiple births, verify that the FBC made a separate entry for each birth on the log.

G. Proceed as follows, based on maternal Rh.
    1. If the mother is Rh positive, proceed to step O.

2. If the mother is Rh negative or weak D positive or RND then proceed to step H.

H. Document the neonate's MRN in the space provided. The neonate's MRN may be obtained from the maternal "patient profile with MRI" in EPIC; be careful to obtain the MRN for the correct baby (with the correct birthdate).
    1. For multiple births, verify that the FBC made a separate entry for each birth on the log.

I. Document the "Neonate Rh Type" and "Repeat Rh Type" column as follows:
    1. If the baby is Rh positive:
        a. Document the "Neonate Rh Type" column as "pos"; as it appears in the Blood Bank computer system.
        b. Document the "Repeat Rh Type" column as NI (not indicated).
    2. If the baby is Rh negative, the Blood Bank computer must be accessed.
        a. If the neonate Rh testing was performed using the manual tube method, verify that the Rh test and repeat Rh test have been taken through the antihuman globulin (AHG) phase. Document the "Neonate Rh Type" and "Repeat Rh Type" columns as "neg".
            i. Verify that an internal test comment is added indicating the initial tube Rh test was repeated the first time a negative result was obtained on the patient.
    3. If the baby is weak D positive or RND:
        a. Document the "Neonate Rh Type" and the "Repeat Rh Type" accordingly. Remember that the mother is a RhIG candidate in these cases.
        b. If the neonate Rh testing was performed in gel, a repeat Rh is not indicated. Document the "Repeat Rh Type" as NI.

J. Determine whether the mother is a RhIG candidate and document the "RhIG Candidate?" column as Y (Yes) or N (No). Proceed as follows:
    1. If the mother is a RhIG candidate proceed to step K.
    2. If the mother is not a RhIG candidate proceed to step O.

K. Determine whether the FCS is indicated. Document the "FCS Result" column as "pos" or "neg" or "NI". Refer to Transfusion Medicine policy, Fetal Cell Screening Using the FMH Rapid Screen Kit for a list of indications.

L. Determine whether the FMH test is indicated. Refer to Transfusion Medicine policy, Fetal Cell Screening Using the FMH Rapid Screen Kit for a list of indications. Perform this step only if the FMH test is indicated.
    1. Document the log with a check mark to indicate that the FMH has been ordered and that the sample has been sent to the flow lab.
    2. Document the log with a check mark to indicate that 1 vial of RhIG has been set up; do not wait for the FMH results to be completed to set up 1 vial of RhIG.

3. Document and affix a *FMH or RhIG Injection Pending* Sticker to the *Communication Log*.
4. After the FMH is completed, document the FMH results on the log and cancel the FMHA test in the Blood Bank computer system. Note that the log is the only location in the Blood Bank where FMH results are documented.
5. Document the log with a check mark to indicate that the *RhIG Candidacy Report* has been finalized.

M. Document the log with the total number of vials that are indicated based on the FCS or FMH results.

N. Repeat the steps of this *Procedure* for each mother who appears on the log. The logs are stored in the RhIG binder, which is located at the Rounds area.

O. The Blood Bank Medical Director or designee will initial and date in the space provided at the top of the log, to indicate that the correct dose of RhIG was prepared for each mother who, as indicated by the Blood Bank on this log, is a RhIG candidate.

P. On the second day after the deliveries have occurred, the technologist assigned to the crossmatch workstation will perform the "Review 2 Days Post Delivery" of all mothers who are Rh negative, weak D positive, RND, has a positive antibody screen, or has a history of unexpected antibodies.
    1. The technologist will check mark, initial and date the applicable column of the log to indicate that the total number of RhIG vials that are indicated on the log have been injected.

Q. Document the "Review 2 Days Post Delivery" column of the applicable log **only if** all required steps to the *Procedure* have been completed and if the log has been documented correctly. This reviewing technologist must independently confirm the accuracy of all of the information that was documented on the log for each mother who is Rh negative, weak D positive, RND, has a positive antibody screen, or has a history of unexpected antibodies.

R. If all required steps of the *Procedure* have NOT been completed, **do not document** the "Review 2 Days Post Delivery column. The technologist must follow-up with the steps that have not been completed. If the steps of the *Procedure* cannot be completed, a variance should be submitted.

VII. REFERENCES:

1. AABB, *Technical Manual*, current edition.
2. AABB, *Standards for Blood Banks and Transfusion Services*, current edition.
3. College of American Pathologists, *Transfusion Medicine Checklist*, current edition.

Attachments

FMH or RhIG Injection Pending Sticker

Obstetrical Delivery Log

Supplemental Obstetrical Delivery Log

Approval Signatures

Step Description	Approver	Date
	Ann Marie Blenc: System Med Dir, Hematopath	2/9/2023
	Kristina Davis: Staff Physician	1/26/2023
Policy and Forms Steering Committe (if needed)	Gail Juleff: Project Mgr Policy	12/21/2022
Policy and Forms Steering Committe (if needed)	Brooke Klapatch: Medical Technologist Lead	12/21/2022
	Rebecca Thompson: Medical Technologist Lead	12/21/2022
	Brooke Klapatch: Medical Technologist Lead	12/1/2022