

Ethical and Medicolegal Considerations in the Obstetric Care of a Jehovah's Witness

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Jehovah's Witnesses comprise a unique obstetric population. Their refusal of blood stems from an interpretation of a literal translation of the Bible, and it is this belief that puts them at an increased risk of morbidity and mortality if hemorrhage occurs. Many Jehovah's Witnesses feel that accepting a blood transfusion will lead them to eternal damnation. A patient's self-determination, or autonomy, allows her to make decisions regarding her care. The decision to refuse blood or blood products has been upheld in court. This brings a new twist to the physician's obligation to "do no harm." When one undertakes the care of one of these patients, it is important to understand the ethical and medicolegal ramifications. The decision to be the primary caregivers can only be made once the physicians have decided they can let the patient die when all other options have been exhausted. This commentary discusses the ethical concerns and reviews the alternatives available to a Jehovah's Witness. (Obstet Gynecol 2003;102:173-80. © 2003 by The American College of Obstetricians and Gynecologists.)

Several unique issues arise when health professionals agree to provide obstetric care to observant Jehovah's Witnesses. It has been shown that if such women have an obstetric hemorrhage, they are at a 44-fold increased risk of maternal mortality.¹ Both ethical and medical concerns should be considered before undertaking the care of one of these patients.

BACKGROUND

To provide comprehensive care to a Jehovah's Witness patient, the obstetrician should understand the back-

ground of their belief system. Charles Russel founded the sect in 1872 in Pennsylvania.² Many of the adherents' beliefs are based on literal translations of the Bible. Genesis 9 and Leviticus 17 state that one cannot eat the blood of life; these passages are interpreted to include the exchange of blood products.³ For the Jehovah's Witness, receiving blood products may lead to excommunication and eternal damnation,² and an individual who offers to transfuse blood is considered by many members of the sect to be acting through the devil's influence. Understanding these facts is crucial when caring for patients who are Jehovah's Witnesses.

ETHICAL CONSIDERATIONS

There are several ethical issues that arise in the care of a pregnant Jehovah's Witness. In "doing no harm" to one of these patients, is it worse to let them die if they need a blood transfusion, or to sentence them to eternal damnation? Most members of the sect will surely argue that eternal damnation is worse. Physicians caring for these women must truly understand this concept before making decisions that may have substantial medicolegal ramifications.

Patient autonomy is central to establishing a good doctor-patient relationship. All patients have the right to refuse care once they understand their diagnosis and the options and alternatives for their management. When the refusal to accept blood transfusions was challenged in court in the case of *Mercy Hospital Inc. versus Jackson* in 1987, it was ruled that a competent adult has a "paramount right" to refuse a blood transfusion on the basis of his or her religious beliefs, as long as the decision is voluntary, informed, and does not endanger the fetus.⁴ In that particular case, Ms. Jackson, a Jehovah's Witness, presented at 26 weeks in preterm labor. Because of the circumstances of the case, including the fetal and placental positions and the patient's medical history, her physicians felt that a vaginal delivery would be contraindicated. In the counseling for a cesarean delivery, they quoted her a 50% probability that she would need a blood transfusion. The patient and her husband agreed that they would not accept a transfusion under any circumstance, and that she would prefer to die rather than receive blood. Mercy Hospital then chose to petition the Circuit Court for Baltimore City to appoint a temporary guardian who would consent to a blood transfusion if this were considered necessary. The court, however, ruled that the patient was competent to refuse blood. The case was then sent to the Court of Appeals. In

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the interim, the patient delivered by cesarean, and both mother and infant did well without blood being transfused. Mercy Hospital argued that even though the point was moot, a decision should be made that could be a precedent for future cases. It was decided that each case should be examined individually because issues, such as compromising the health of the fetus, would affect the ruling.⁴

Patient autonomy has been challenged in cases where a woman who is choosing to refuse blood has children who are minors. A Florida case, *Wons versus Public Health Trust of Dade County*, involved a 38-year-old mother of two children, ages 12 and 14, who presented to University of Miami/Jackson Memorial Hospital with dysfunctional uterine bleeding.⁵ She was symptomatically anemic and required a transfusion, but she refused this based on her religious beliefs. The hospital requested a court order to transfuse, and a lower court consented, citing “the protection of innocent third parties (ie, her minor children)” as sufficient grounds to override her refusal.⁵ However, this case went to the Florida District Court of Appeal, who concluded that a possible death from refusal of transfusion would not “result in an abandonment of her two children” because the father and extended family could provide support for the children.⁵ The ability to provide a next of kin for minor children will usually determine if a court will overrule patient autonomy on this issue.

A patient’s self-determination includes the right to die. This right has been recognized in the judicial system in an increasing variety of circumstances.⁶ A patient’s refusal of blood transfusion has been affirmed in court in cases where the mother has died. In *Shorter versus Drury*, a wrongful death suit was filed when a Jehovah’s Witness hemorrhaged during the course of a dilation and curettage when the uterus was perforated. The ruling in this case granted partial damages to the patient’s family because of the uterine perforation, but held that refusal of the transfusion and lack of transfusion thereafter were appropriate.⁷ A similar verdict was rendered in *Garcia versus Edgewater Hospital*, where a patient died after heart surgery when a defective replacement heart valve caused excessive blood loss.⁸ In cases where the physician did not commit malpractice, the decision not to transfuse has been upheld.^{9,10}

What happens when the patient is unconscious? Assuming that a Jehovah’s Witness has had appropriate prenatal care, a health care proxy should be signed at the first visit that clearly outlines what, if any, interventions are acceptable to her. Furthermore, a health care surrogate should be assigned to make decisions in these cases. Unfortunately, however, this is often not the situation. If a patient is unconscious and no other information is

available, an indicated transfusion should be administered. When a family member refuses transfusion for an unconscious patient whose wishes are not known, a court order should be sought to clarify the situation. In this setting any dispute, be it intrafamily, interfamily, family versus doctor, doctor versus doctor, or doctor versus hospital, should be resolved by emergency court order before proceeding with management.

The physician has rights as well, and can refuse to provide care for a Jehovah’s Witness if an alternative caregiver agrees to take the case, and the patient is not in an emergent situation. The ethical concept of beneficence is fundamental here. Beneficence is defined as unconditional goodwill and compassion for the benefit of those within our care. It is always difficult for a physician, who has been trained to save lives, to permit a patient to make a decision that leads to her death. A physician has to be both willing and able to allow a properly educated patient to die once she has decided to do so. When arranging for the transfer of care, it is preferable to send obstetric patients to a physician associated with a tertiary care center, and consultation should be obtained with a maternal–fetal medicine specialist. The transferring physician is obligated to ensure that another physician is available and has agreed to accept the patient. This may be difficult to arrange in an emergency situation, so early transfer of the patient’s care is extremely prudent.

PRENATAL CARE

There are certainly many caveats to be considered when agreeing to care for a member of this sect. First, it is very important to recognize that not all Jehovah’s Witnesses adhere to the same beliefs. Victorino and Wisner¹¹ reported that some of these patients will accept donated blood and blood products in the most dire of situations, whereas others will not even consent to autologous blood transfusion. Second, strong familial and church pressures can influence a patient’s decision while in the presence of others. This is why it is important to discuss a patient’s wishes while you are alone with her. Finally, the responsible attending physician must decide if he or she is willing to let the woman die because of her beliefs.

Once a physician has made the decision to care for a Jehovah’s Witness, there are several steps that should be taken to maximize the chances for a favorable pregnancy outcome. A written protocol assures that each patient will receive the same standard of care. At the Mount Sinai Medical Center, once a Jehovah’s Witness presents for obstetric care, a health care provider versed in the protocol will see the patient, and a copy of that protocol with an attached checklist is attached to the prenatal

chart (Appendix).¹² Ideally, the patient should also be evaluated by a maternal–fetal medicine specialist before the third trimester,¹² and if possible, she should deliver in a tertiary care center.

When a Jehovah's Witness presents for her first prenatal visit, all routine prenatal laboratory data should be sent, including a complete blood count with platelets, and she should be started on iron and folic acid supplementation. The goal should be to maintain the patient's hematocrit above 40%.¹² If the initial hematocrit is below this level, a workup for potential causes of anemia should be initiated. If iron deficiency is documented, the dose of iron supplementation can be adjusted accordingly, and a stool softener such as docusate sodium should be prescribed. The eating of foods high in heme content, such as meat, poultry, and fish, should be encouraged.³ Vegetarian diets are low in heme, and tannins found in tea and phylates in bran can decrease the absorption of iron,¹³ so it is important to supplement this subgroup. In addition, vitamin C enhances the absorption of iron in the gastrointestinal tract.

Erythropoietin may also be considered for a patient with a hematocrit of less than 40% who has not responded to iron supplementation.¹² Erythropoietin stimulates the bone marrow to maximize red blood cell production. Not all Jehovah's Witnesses will accept this medication because the drug is packaged with 2.5 mL of albumin per dose. A discussion should ensue about how the medication works and how it is constituted to help the patient make an informed decision.

A comprehensive discussion about what blood products the patient may be willing to accept, and the available alternatives, should be part of the initial prenatal visit. This conversation should occur in the absence of outside influences that may alter the woman's responses. A checklist of blood and blood products, including whole blood, fresh frozen plasma, cryoprecipitate, albumin, and isolated factor preparations, should be reviewed with the patient to see which one of these, if any, is acceptable.¹² Next, a discussion of autologous blood donation should ensue.³

Autologous blood donation involves optimizing the patient's hematocrit with oral iron supplementation (or erythropoietin if this is acceptable)³ and then having her donate her own blood at least 72 hours (but, ideally, 2 weeks) before elective cesarean delivery or estimated date of delivery. After appropriate testing the blood is then stored and held for the patient, and discarded if not used at the time of delivery.¹⁴ This process is somewhat tedious, but if the patient is willing to accept her own blood, it could be lifesaving.¹⁴

Aside from allogenic blood or blood products, other options should also be discussed with the patient. Cell

salvage systems can be employed as a form of intraoperative autologous blood donation.^{3,15} "Cell saver" systems allow for free blood in the abdomen to be aspirated, filtered, and then reinfused into the patient perioperatively.¹⁵ They work via centrifugal cell separators that segregate the red cells from the plasma, wash them with normal saline, and prepare them for reinfusion. Using a cell saver during a cesarean delivery carries the potential risk that fetal cells may enter the maternal circulation if they are not properly filtered by the system.¹⁶ Theoretically, this could result in an amniotic fluid embolism. A review of MEDLINE from 1966 to August 2002 (key words "cell saver" and "pregnancy"), however, revealed no such cases reported in the literature. Furthermore, recently The American College of Obstetricians and Gynecologists advocated the use of cell salvage systems during cesarean delivery for placenta accreta.¹⁷ Clotting is prevented by using a double-lumen tube with one lumen for suction and the other for a constant flow of anticoagulant.¹⁵ The use of these systems in pregnancy has been shown to be safe and may be lifesaving.^{17,18}

To complete the overview of alternatives, an anesthesia consultation should be obtained to discuss some additional techniques available to combat massive blood loss. Ideally, there should be a core group of obstetric anesthesiologists involved in the patient's care who are familiar with the relevant protocols and versed in the implementation of intraoperative alternatives to blood administration in women with massive intraoperative bleeding. All of the anesthesiologists in this group should be comfortable with the management plans because refusal to accept blood may result in patient death on the operating table. If a member of that group does not feel that he or she can withhold a transfusion, a backup physician should be immediately available who can take over if needed.

Intraoperative techniques involved in the abatement of a massive hemorrhage include normovolemic hemodilution, controlled hypotensive anesthesia, sedation, and muscle paralysis. Normovolemic hemodilution involves removing whole blood in the immediate preoperative period and replacing it with crystalloid or colloid.³ This causes a decrease in the viscosity of blood, allowing for better tissue perfusion. Because the circulating blood has become low in red cells, there is a shift of the oxygen dissociation curve to the right, optimizing the oxygen-carrying capacity of the red cells.¹⁵ Once the perioperative blood loss has been stemmed, whole blood can be replaced. This technique has been used safely in some pregnant patients.¹⁹ Controlled hypotensive anesthesia involves reducing the mean arterial pressure to 50 mm Hg.³ This is the minimum requirement for tissue perfusion, yet allows for minimization of blood loss in the

setting of substantial intraoperative hemorrhage. Sedation and muscular paralysis have also been used both peri- and postoperatively to decrease oxygen consumption.³

Once the options and alternatives to management have been discussed, the patient should be aware that in the case of a significant postpartum hemorrhage a hysterectomy might be necessary, and should be performed much earlier than would be the case in women who will accept blood transfusions. The potential need for hysterectomy is part of routine consent for any patient admitted to labor, but in the case of a Jehovah's Witness, if hemorrhage occurs there should be a much lower threshold for definitive surgical management. Expectant management in this case can result in greater blood loss, which may be life threatening without the option of blood product replacement.

Once a Jehovah's Witness has declared what forms of management are acceptable, the next step involves making end-of-life decisions and assigning next of kin to her children. This serves not only to convey to the patient the importance and potential consequences of blood refusal, but also to prevent a court order reversal of such refusal. It is important that the patient understands that refusal to accept blood or blood products substantially increases her risk of both morbidity and mortality if major hemorrhage occurs. She should feel comfortable that with appropriate early prenatal care her condition can be optimized before the intrapartum period, but she should also know that even with the best "alternatives" to blood transfusion, she still could die.

CONCLUSION

To provide optimal prenatal care for a Jehovah's Witness, the obstetrician should be well versed in the management and available alternatives for these types of cases. The patient should deliver at a tertiary care center with an in-house obstetric anesthesiologist available. She should be evaluated by a maternal-fetal medicine specialist and an anesthesiologist before the third trimester. A woman who is well informed about her options can then decide exactly what she wants done in the event of a life-threatening hemorrhage.

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MATERNAL CHILD HEALTH CARE CENTER

Distribution:	OBSTETRICAL PROTOCOLS FOR THE CARE OF	No.
General, MCH	JEHOVAH'S WITNESS PATIENTS	Page 1 of 10

Patient Population

Original Date of Issue _____ 7/96

Reviewed:	8/99					
Revised:	4/00					
Revised:	11/02					

Neonate	
Pediatrics	
Adolescent	✓
Adult	✓
Geriatric	

This policy will provide standardized protocols for the management of obstetric Jehovah's Witness patients at Mount Sinai Medical Center.

Provider Requirements

All physicians, midwives, and other licensed providers annually must sign an attestation agreement, filed in the Department of Obstetrics, Gynecology, and Reproductive Science (hereafter called "the Department"), signifying an understanding of the departmental protocol, prior to registering or admitting a Jehovah's Witness patient.

- 1) Upon appointment, obstetricians, midwives, and licensed providers must sign the *Attestation of Understanding of the Obstetrical Protocols for the Care of Jehovah's Witness Patients* (see Attachment D).
- 2) Annually, in July, the Department will send each appointed obstetrical provider a copy of the protocol for review. Written acknowledgement of the protocol is required annually, to be filed in the professional file of the Department.

Protocols

All licensed providers are responsible to insure that the following protocol is followed for all pregnant Jehovah's Witness patients cared for at Mount Sinai Medical Hospital.

I. Prenatal. When a Jehovah's Witness is accepted for obstetrical care by any physician, midwife, or licensed provider credentialed to provide care, the provider *must*:

- 1) Send written notification of acceptance of the patient for care to the Department (see Attachment A).
- 2) Initiate the *Obstetrical Flow Sheet for Jehovah's Witness Patients* (see Attachment C) and include it in the patient's prenatal record.
- 3) Include a copy of the policy (*Obstetrical Protocols for the Care of Jehovah's Witness Patients*, Attachment F) in the prenatal medical record, for reference.
- 4) The Health Care Proxy form (NYSPHL #2980-2994) and Mount Sinai forms (a) Blood Product Check List for Jehovah's Witness Patients and (b) Refusal to Permit Blood Transfusion needs to be reviewed point by point and signed by the patient,

preferably prior to 28 weeks gestation. This review and witnessed signing of documents must be performed either by the patient's obstetrician or in consultation with a member from the Division of Maternal-Fetal Medicine. A copy of all signed forms should be given to the patient, and a second copy (along with the consultation if it was obtained) sent to the nurse clinical manager of Labor and Delivery (Mount Sinai Box 1153). The original forms should be kept in the patient's office chart, and the copies sent to Labor and Delivery will be kept in a spiral binder dedicated to Jehovah's Witness obstetrical patients. If the patient registers for care after 28 weeks gestation, the review and signing of these forms must be made a priority. Consultations are the responsibility of the individual attending or, in the case of Ob/Gyn Associates, the attending or the Chief Resident. If an attending physician recommends that a patient seek consultation with a member of the MFM Division and that patient declines the consult, or fails to go to the consultation visit, this refusal or lack of compliance must be documented on the medical record by the provider, and the Chairman of the Department or Director of Labor and Delivery should be contacted regarding further action.

- 5) All Jehovah's Witness patients, beginning at 26–28 weeks gestation, must be evaluated for any hematocrit < 40%.

All patients whose

- 1) hematocrit is <40% must have the hematocrit corrected, with the appropriate use of iron, folic acid, and erythropoetin (per protocol, see Attachment F). In certain clinical scenarios, care should be coordinated with an attending in the MFM Division and/or a Hematologist.
 - 2) hematocrit is $\geq 40\%$ should appropriately take iron and folic acid.
- 6) If a patient is at high risk for hemorrhage, or an operative delivery is anticipated (repeat cesarean sections with anterior placenta, placenta previa or accreta), Interventional Radiology can be contacted by the provider to discuss the possibility of preplacement of an embolization catheter or vascular balloons. If embolization catheters are placed, members of the MFM and Gyn Oncology Divisions should be made aware of the patient prior to admission.

II. Emergencies. All emergency admissions or unregistered admissions of Jehovah Witness patients must have a stat MFM consultation on admission.

III. Intrapartum.

- a) Upon admission, MFM must be notified by the attending, or for Ob/Gyn Associates, the Chief Resident or the attending of the day/night.
- b) *Consents:* Upon admission and prior to surgery/delivery, all Jehovah's Witness patients *must* sign the following consent forms:
 - 1) Watch Tower Society Acknowledgement Form (Attachment E), also known as Health Care Proxy (NYSPHL #2980–2994).
 - 2) Generic hospital consent form.
 - 3) Consent or refusal to receive specific blood products
 - Whole Blood
 - Fresh Frozen Plasma
 - Cryoprecipitate
 - Albumin
 - Isolated Factor Preparations

(Note: Autologous blood donation: Providers should read the document *FOJP Focus 1990 No. 4*, which explains autologous blood donation.)

- c) An Anesthesiology consult should be obtained. The Anesthesiologist will review the patient's medical record and signed consent forms, including consent or refusal for blood products.
- d) If bleeding disorder is anticipated, or an operative delivery is planned in a woman with a history of a low lying or placenta previa, and the patient is agreeable to its use, a Cell Saver should be obtained from the Operating Room to be on standby on the delivery floor throughout the patient's labor and delivery. This can be arranged by contacting inhouse pager #1536.

Attachment A: Department Notification

Date:

To: Administrator, OB/GYN & Reproductive Science
From:

This is to advise you that a patient under my care:

Name: _____ MR#

EDC:

has advised me that she is a Jehovah's Witness and wishes to follow the bloodless policy of the Watchtower Society and deliver her baby at Mount Sinai Hospital. I will be implementing the OBSTETRICAL PROTOCOLS FOR THE CARE OF JEHOVAH'S WITNESS PATIENTS INCLUDING THE USE OF ERYTHROPOETIN (attachment F).

Attachment B: Department Confirmation to Provider

To:
From:
Subject: Notice to Admit a Jehovah's Witness Patient for Delivery

We received your notification that you intend to admit patient _____ for delivery on approximately _____; your attestation indicating your willingness to adhere to the *Obstetrical Protocols for the Management of Jehovah's Witness Patients* is on file. Enclosed is a copy of the protocol for your reference. Please use the attached Flow Sheet (Attachment C) in the patient's prenatal medical record to document adherence to the policy and to insure optimal care.

cc: MD Chair, OB/GYN QA
Clinical Nurse Manager, L&D

Attachment C: Mount Sinai Hospital Department of Obstetrics, Gynecology, and Reproductive Science Obstetrical Flow Sheet for Jehovah's Witness Patients

Attach to the prenatal record.

Initial __ Date Done _____ Notify the Department of Ob/Gyn upon registration of the patient.

Initial __ Date Done _____ Consents for (include in the prenatal records):

- Blood Product Acceptance Checklist
- No Blood Products Accepted**
- Whole Blood
- Fresh Frozen
- Cryoprecipitate
- Albumin
- Isolated Factor Preparations
- Health Care Proxy NYSPLH #2980-2994

Initial __ Date Done _____ Hct. at 26-28 weeks gestation _____ %

Hematocrit < 40%

Initial __ Date Done _____ Institute Protocol as per Attachment F

- MFM Consult
- Hematology Consult

Initial __ Date Done _____ **Hematocrit ≥ 40%**

Appropriate use of iron & folic acid

Initial __ Date Done _____ Anemia Correction (based on Hct. @ 26-28 weeks)

H/H __ H/H __ H/H __ H/H __ H/H __

Date __ __ __ __ __

Attachment D: Attestation of Understanding of the Obstetrical Protocols for the Care of Jehovah's Witness Patients

To:
From: Chairman, Department of Obstetric, Gynecology, and Reproductive Sciences
Date:
Re: Jehovah's Witness Patient Management Attestation

The attached protocol has been developed for the management of Jehovah's Witness obstetrical patients. In order for you to admit a Jehovah's Witness patient to Mount Sinai Hospital, it is necessary for the department to verify that you have reviewed, understood, and agreed to abide by this policy. Please sign and date this attestation in the indicated spaces and return it to the department's administration office on KP9 to the attention of _____. Please retain the protocol (attachments C and F) for your records.

Signature
Date

Attachment E: Watch Tower Society Acknowledgement Form or Health Care Proxy Form NYSPLH #2980-2994

[This form generated by New York State allows patients to put their health care instructions in writing and to designate a health care agent to make health care decisions when the patient is not able to communicate his or her wishes.]

Attachment F: Obstetrical Protocols for the Care of Jehovah's Witness Patients Including Use of Erythropoetin

Jehovah's Witness patients present a special challenge in management because of their refusal to accept blood or blood products. The availability of recombinant erythropoetin (r-epo) to stimulate erythropoiesis offers the possibility of reducing the risk of morbidity and mortality from severe hemorrhage by allowing preoperative stimulation of erythropoiesis. All candidates for r-epo must be informed that the drug is recombinant but that it is packaged with a stabilizer that includes a minimal amount of human serum albumin—a blood-derived product. The overwhelming majority of Jehovah's Witness patients find this acceptable, but a minority of individuals refuse to accept *any* blood-derived material, whatever its amount or state of purification. Where applicable, patients must also be advised regarding the financial aspect of treatment. History must be taken regarding previous bleeding (postoperative, postdelivery,

spontaneous ecchymoses, petechiae, epistaxis, gingival bleeding, hemarthrosis, menorrhagia, hematuria, myeloma, blood per rectum, previous blood or blood product transfusion), previous hematologic or thrombotic disorders, and family history for hematologic, hemostatic, and thrombotic disorders. Patients should be made aware that hypertension and venous thrombosis could be a side effect when r-epo is utilized. Women who will be treated with r-epo are required to have the following laboratory studies drawn and evaluated before treatment: baseline CBC with platelets, reticulocyte count, serum ferritin, hemoglobin electrophoresis, chemistry screen (Na, K, Cl, HCO₃, BUN, Cr), baseline pulse and blood pressure; additional tests can include TIBC, serum Fe, folate, and B₁₂ levels. Any patients with a hemoglobinopathy should have a consultation with Hematology or Maternal-Fetal Medicine prior to utilizing r-epo. The following protocol is offered:

- 1) *For patients with hematocrit ≥ 40%:* The patient should be encouraged to continue or initiate once-daily iron supplementation with folic acid or PNV. There is no indication for treating these patients with erythropoetin; use of that medication in this clinical scenario should be evaluated on a case-by-case basis, and it should be administered with caution. Its use in this situation should be approved and coordinated with Hematology or Maternal-Fetal Medicine.
- 2) *For patients with hematocrit 35.0–39.9%:* In patients who are at low risk for bleeding complications, once-daily iron supplementation with folic acid or PNV should be increased to *BID dosing of iron*, and the hematocrit should be reassessed in 4 weeks. In patients who are at high risk for bleeding complications or in those who do not respond to increased iron supplementation, erythropoetin can be given, preferably at least 2 weeks prior to anticipated delivery. Erythropoetin can be given without consultation with Hematology or Maternal-Fetal Medicine as long as a) there are adequate ferritin stores, b) no hemoglobinopathy is present, and c) the obstetrician is reassured that the patient will be compliant with follow-up care. The erythropoetin should be started at 100 U/kg body weight 3× weeks SQ for 2 weeks. A baseline BP should be obtained, and this should be repeated 1 week later. At the end of 2 weeks, there should be a response to the therapy as assessed by the CBC; the hematocrit goal should be 40–45%. If there is no response, the dose can be increased to a maximum of 500 U/kg body weight, but consultation should be obtained with Hematology or Maternal-Fetal Medicine in this situation. When erythropoetin is administered, the patient should be taking iron supplementation two or three times daily along with folic acid or PNV.
- 3) *For patients with hematocrit 30.0–34.9%:* Patients who are at low risk for bleeding complications should be encouraged to take iron supplementation two or three times daily along with folic acid or PNV, and the response should be reassessed in 4 weeks. Erythropoetin use can be discussed with these patients and administered as previously described, with the goal being to increase the hematocrit to 40–45%. In patients with a hematocrit of 30–34.9% who are at high risk for bleeding complications, erythropoetin use should be encouraged and given as previously described.
- 4) *For patients with hematocrit < 30%:* When the hematocrit is <30%, all pregnant Jehovah's Witness patients should be strongly encouraged to take r-epo as long as it does not interfere with their interpretation of their faith. In seeking guidance from within their church, some Elders will say that this therapy is acceptable, others will say it is not because of the small amount of albumin that is present to stabilize the synthetic erythropoetin, and a third response may be that the patient must use her own conscience to make the decision.
- 5) The need for MFM consultation for the Jehovah's Witness patient is left at the discretion of the attending (except where previously indicated), but should strongly be considered in cases where risk of hemorrhage is high (previous cesarean section with an anterior placenta, placenta previa or accreta, severe maternal anemia) so that the consultant can assist with coordinating involvement/availability of Gyn Oncology, assist in management of parenteral iron supplementation, and arrange for embolization catheter placement if it is deemed necessary.
- 6) A member of the Division of MFM should always be notified when the patient is in labor so that if there is an obstetric hemorrhage, they may assist in the management, which may include involving Gyn Oncology or Interventional Radiology and coordinating transfer of the patient to an ICU setting if needed.

Blood Product Check List for Jehovah's Witness Patients

I hereby consent to the blood products marked below:

- Whole Blood
- Fresh Frozen Plasma
- Cryoprecipitate
- Albumin
- Isolated Factor Preparations
- None of the above

Patient's name (please print) _____

Patient's Signature _____

Date _____