1. Does maintaining a pregnancy in the third trimester have a negative effect on healing of a pelvic fracture? Is there an effect of lactation on fracture healing? If close to term (greater than 34 weeks), would it be better to deliver the fetus prior to reduction of a pelvic fracture? Does a continuing pregnancy alter the need for or choice of anticoagulants? Does a history of a pelvic fracture eliminate the option of a vaginal delivery in the future?

Response from Dr. Haywood L. Brown:

Pregnancy does not have any impact on healing of fractures. However, physical therapy for rehabilitation after a pelvic fracture may be limited in the third trimester.

Reduction of a fracture should be performed without delivery intervention. As such, a woman at or greater than 34 weeks of gestation should not be delivered to accommodate fracture reduction.

Anticoagulation should be with unfractionated or low molecular weight heparin. Both are commonly used in pregnancy. The usual heparin-related complications should be emphasized, including the risk of hemorrhage with therapeutic anticoagulation. In most instances, a prophylactic dosage of heparin or low molecular weight heparin does not significantly alter the laboratory coagulation profile. Anticoagulation with warfarin is contraindicated in pregnancy.
Vaginal delivery is still possible after reduction of a fracture depending on the timing of the fracture from the onset of labor. As such, prior healing pelvic fracture is not a contraindication to a trial of labor and vaginal delivery. The patient who is immobilized with a pelvic fracture would more likely benefit from a cesarean delivery due to immobility.

2. If a patient is involved in a motor vehicle accident during a pregnancy requiring 24 hours of monitoring but stabilizes and leaves the hospital, should that history influence timing of delivery at term? Could she be allowed to go past 40 weeks of gestational age?

Response from Dr. Haywood L. Brown:

The patient who has been appropriately monitored after a motor vehicle accident can be discharged to the usual antenatal care follow-up. If the mother and fetus are doing well, then the accident should not influence timing of delivery. She can be allowed to progress to term in anticipation of normal labor. The usual monitoring and delivery recommendation should be followed if she progresses to postdates.

3. Due to the hemodynamic changes of a pregnant trauma victim, do you recommend a low threshold for placement of central venous catheters? Are there any different issues in their use with the pregnant patient?

Response from Dr. Haywood L. Brown:

The indication for use of central venous monitoring in the pregnant trauma patient should be the same as for nonpregnant women. However, because of the hemodynamic alteration of pregnancy and the tendency to mask blood loss, the health care team should have a lower threshold for central monitoring. Volume replacement needs to be adjusted upward by as much as 50% in cases of severe hemorrhage in the third trimester of pregnancy. Central
monitoring is essential in such cases for optimal fluid and blood product replacement.

4. What is the best way to screen women for intimate partner violence? Why do you recommend screening when the U.S. Preventive Services Task Force finds insufficient evidence to recommend screening?

Response from Dr. Haywood L. Brown:

The incidence of abuse during pregnancy ranges from 1% to 20% and is addressed in ACOG Committee Opinion Number 343, “Psychosocial Risk Factors: Perinatal Screening and Intervention” (Obstet Gynecol 2006;108:469–77). ACOG recommends screening every pregnant woman for intimate partner violence at the first prenatal visit, at least once a trimester, and at the postpartum visit. Clearly, a woman who presents with trauma with physical findings suggestive of abuse need to be asked questions that might reveal such evidence. While the U.S. Preventive Services Task Force reports insufficient evidence for women in general, pregnancy is a vulnerable and susceptible period for women in terms of her physical health and the health of her unborn infant and other children in the home.

5. Which tocolytic do you prefer to use in the setting of uterine contractions arising from trauma? Why do you prefer it over the other options?

Response from Dr. Haywood L. Brown:

My preference for tocolysis for preterm labor after trauma is indomethacin (anti-prostaglandin). This provides good uterine relaxation in the recommended dosage with minimal maternal side-effects. The drug has some limitations in that it should not be used beyond 32 weeks and for no more than 48 hours because of the potential for oligohydramnios and premature closure of the ductus arteriosus. Magnesium sulfate is a good alternative. Beta
mimetic drugs such as brethine should be avoided because of the unfavorable maternal cardiovascular effects that may mask bleeding. Calcium channel blockers can also cause hypotension in the setting of hypovolemia.

6. Is there a role for surgical repair of the uterus injured with penetrating trauma without resorting to delivery, particularly with an unharmed fetus less than 24 weeks of gestational age? If so, what are the critical elements of postoperative care?

Response from Dr. Haywood L. Brown:

This depends on the severity of uterine injury and gestational age. If the uterus has significant injury such as with entry with a stab wound, gunshot, or rupture, then its best to evacuate the uterus regardless of gestational age, especially if the fetus is viable. However, minimal injury to uterus that has not disrupted the placenta and with a nonviable fetus may be considered for attempted repair. We now recognize that the uterus can be opened prior to viability with the advent of intrauterine fetal surgery. The risk for preterm labor, infections, and pregnancy loss remain high for the woman with uterine disruption that requires suturing. In most instances where the uterus receives even minimal repair, prophylactic uterus relaxation with a tocolytic such as indomethacin should be administered postoperatively to avert uterine contractions.