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RE: Monica Wren v Dabney Hamner (Your file 1790-001)

January 11, 2021

Dear Mr. Dunbar,

I am an MD, Board-certified by ACOG in both OB/GYN and Maternal Fetal Medicine since 2006. I completed Fellowship Training in Maternal Fetal Medicine in 2000 at MetroHealth Medical Center-Case Western Reserve School of Medicine in Cleveland, Ohio, after having completed residency in OB/GYN at Cooper Hospital in Camden, New Jersey. I have served on the teaching faculty of University-affiliated OB/GYN residencies at MetroHealth-Case Western Reserve School of Medicine, The Ohio State University School of Medicine, and Crozer Chester Medical Center, where I was an Adjunct Associate Professor of OB/GYN with Drexel University School of Medicine. I am currently an attending Maternal Fetal Medicine subspecialist with Virtua Health Systems in Southern New Jersey, and serve as Chair of the Department of OB/GYN at Our Lady of Lourdes Hospital in Camden NJ. Over the course of my career I have played a role in resident education, including labor and delivery management of laboring, non-laboring, medically complicated, term and preterm pregnancies. I am by training and experience an expert in the management of pregnancies such as that which is the focus of this case. I have previously published in peer-reviewed journals on the subject of obesity in pregnancy, diabetes in pregnancy, and the delivery complications that Ms. Wren experienced. The opinions I offer are to a reasonable degree

of medical certainty and apply to the reasonably prudent minimally competent obstetrician as to the standard of care.

In preparation for the production of this report, I have reviewed the following records, policies, depositions, and other documents supplied by your office:

1) Outpatient OB Records- Methodist Medical Group 5/10/16 through 10/25/16, Deberry 312-383

2) Obstetric ultrasound reports, 5/10/16 (Deberry 346-349), 7/8/16 (Deberry 342-345), 10/5/16 (Deberry 775), and 10/18/16 (Deberry 621-622)

3) Pathology (placenta)- 10/31/16, Deberry 341

4) Inpatient medical record, delivery hospitalization, Baptist Memorial Hospital 10/30/16-11/3/16, Deberry 384-596

5) Consent authorizing C-Section 10/18/16, Deberry 746

6) Sariyah Deberry's records from Baptist Memorial Hospital-DeSoto for 10/31/16 through 11/3/16, Deberry 802-1000

Review of case facts:

Monica Wren is a 30-year-old gravida 3 para 2 who had a due date of 11/14/2016. Her pregnancy was complicated by obesity, A2 gestational diabetes, and later mild preeclampsia. Her prior obstetrical, gynecologic and medical history are unremarkable but for her obesity. She had a history of a right shoulder fracture in 2006 and a laparoscopic cholecystectomy in 2015. She did not smoke.

Prior obstetrical history includes all vaginal deliveries prior to the pregnancy involved in this litigation. Her largest previous pregnancy was delivered at 8 pounds 7 ounces and 40 weeks gestational age.

Monica presented for prenatal care at 13 weeks gestational age weighing 345 pounds, corresponding to a BMI of 67.4. This class III obesity classifies her as a high-risk pregnancy. On

5/10/16, she is appropriately screened for pre-existing diabetes with a hemoglobin A1c. This result is 6.1, indicative of glucose intolerance, or "prediabetes". This lab result is obtained on 5/10/2016. The standard of care ("SOC") here includes early glucose challenge, and referral for consultative care with any of the following: Maternal Fetal Medicine, Endocrinology, diabetes education, and/or a dietician. There is no record of a referral being made, and if none occurred, then the SOC was violated. On 6/13/2016 the patient returns for prenatal care and receives a Quad and finally has a glucose challenge test. The Glucola result is 206, obtained on 6/14/16, with a note for nurse to call with instructions. An OGCT value over 200 is diagnostic of diabetes, and standard of care dictates consultative management at this time. No such consult, with MFM, diabetic teaching services, dietician was requested. It should also be clear that sending a glucola more than a month after receiving an early screen result indicative of glucose intolerance is a clear deviation from standard of care, and delay in recognition of what is likely pregestational diabetes increases the likelihood of untoward pregnancy outcomes such as shoulder dystocia. There is no record that the patient was ever called. Even without referrals mandated above, there is no mention in her progress note with regard to her diabetic screening result, care and management for obesity, counseling with regard to diet, exercise, glucose monitoring, or counseling with regard to the implications of her various pregravid conditions on the outcomes of pregnancy. All of these are required according to the standard of care. In fact, the reason listed for the appointment is "gender". The following visit is a month later for "22-week scan" and prenatal care. It is noted that patient did not go to her scheduled diabetes class, this class was rescheduled for 7/28/16 (assuming the referral was made). There is similarly no mention of management with regard to obesity or diabetes. Her blood pressure upon initial presentation to care is noted to be normal.

Management of the ongoing pregnancy continued without collaborative care best suited for such high-risk pregnancy. At her 25-week 6-day prenatal care visit (8/8/2016) a random fingerstick is obtained. This result is 104 mg/dL. At this visit notation is made that "the patient reports normal blood sugars at home", and that she attended a diabetic teaching class. There is no documented review of such blood sugars. There is similarly no documentation of a discussion with regard to the risks to diabetes in pregnancy including but not limited to large for gestational age infants and delivery complications. Patient is not sent for consultation with maternal-fetal medicine nor is she scheduled for third trimester ultrasound assessment of interval fetal growth, according to the standard of care in light of both glucose intolerance and massive maternal obesity. At this point the pregnancy and patient's offspring are placed at grave risk for complications including fetal overgrowth, in utero demise, delivery complications such as shoulder dystocia and failed trial of labor, as well as adverse health outcomes such as obesity, diabetes, hypertension, abnormal lipids and cholesterol and heart disease. Further, at this prenatal care visit it was determined that her urine indicated she has a UTI. She is not notified or put on any type of medication for this UTI until 8/15/16, a full week later.

In the absence of consultation with subspecialty trained providers, Monica was prescribed a low-dose of glyburide for blood sugar control at a 28-week and 6-day gestational age visit. Again, medical management of diabetes in pregnancy is best left to those with training and experience, particularly in patients with whom cooperation has been minimal. The level of expertise exhibited in the initiation of glyburide for a patient without data showing what degree of glucose control agent was needed is lacking. Consultation here would have again be necessary to meet the standard of care. Had it been obtained, input from Maternal Fetal Medicine consultation would have included data that suggests oral agents alone are rarely sufficient for the control of blood sugar in

women for whom pregestational glucose intolerance is suspected, such as this patient. Her random fingerstick blood sugar at this visit is 232. It is documented that she has been "noncompliant with dietary restrictions. There is no blood sugar log ever included in the record nor is there documentation of such being reviewed. Of note, her blood pressure at this visit is 143/87 with proteinuria, and there is no workup for severe preeclampsia. This is also a deviation from standard of care that places the pregnancy and patient at risk for complications including death. There was still no referral to maternal-fetal medicine for consultation in this high risk pregnancy, as required by the standard of care. There is no plan described for improved cooperation with care, monitoring of fetal growth or wellbeing or delivery planning, as required by the standard of care.

At 31 weeks and 1 day pregnant, Monica presented for prenatal care with a random fingerstick blood sugar of 203. It was recommended to her that she be admitted "for diabetic control". She apparently declined this admission and re-presented for prenatal care at 34 weeks gestational age, labeled "noncompliant". Her random fingerstick blood sugar at that point is 114. There is no documented discussion with regard to the risks of poorly managed probable pre-gestational diabetes, or for that matter her hypertensive disease in pregnancy, as required by the standard of care. The patient was referred L&D. While at the hospital she underwent nonstress test, an OB US was performed by radiology at this point. This report does not contain information that would have been provided by MFM ultrasound, such as proportion of head to abdominal circumference, or fetal weight percentiles, but I have calculated them. This first growth scan estimated the weight of the fetus to be 6 lbs. 10 oz. This result (3009 grams) is greater than the 90th%ile, defined as "large for gestational age". This result alone requires a repeat evaluation in four weeks prior to counseling and planning with regard to route of delivery, even if the patient were not massively obese and diabetic. Not pursuing this abnormal ultrasound deviates from the

acceptable standard of care and exposes the newborn to risk of shoulder dystocia, failed trial of labor, and injury at birth. It also exposes the patient to complications from cesarean in labor. She began a 24 hour urine collection test, but at this time, she again refused to be admitted to the hospital. She returned on 10/7/16 to deliver the completed 24 hour urine collection. The results were called into her doctor at this time, but there is no mention of this in his records. There is no referral made for maternal-fetal medicine, or plan made for follow up sonographic evaluation of fetal growth, according to the standard of care. There is no fetal testing performed, or planned. Standard of care regarding fetal testing for obesity prescribes weekly NST. In a woman in whom gestational diabetes is being managed with medications, these tests are increased to twice weekly to mitigate the increased risk for in utero fetal death. The timing of the initiation of testing varies, but earlier testing is suggested in women with poor control, poor compliance, or co-morbid conditions such as massive obesity and hypertension. This patient should most certainly had twice weekly NST initiated at 32-33 weeks. There is no indication that regular testing beyond what was performed in the course of routine office visits was performed. This represents a clear deviation from standard of care in the management of both the obese gravida and the gestational diabetic, exposing the fetus to the risk of injury, death or predictable complications.

Outpatient evaluation of fetal well-being is now indicated for poorly controlled A2 gestational (and likely pre-gestational) diabetes, as well as hypertensive disease in pregnancy according to the standard of care. Monica appeared to have nonstress tests at the time of her obstetrical visit. This is profoundly odd, and violates the standard of care. She did not undergo non-stress testing or BPP until 34 weeks despite three conditions associated with third trimester fetal death: obesity, poorly controlled diabetes and hypertensive disease in pregnancy. There is no follow-up A1c sent to assess adequacy of management.

At 36 weeks gestational age, the patient is admitted to hospital for fetal testing and diabetic control. While in the hospital she has three nonstress test performed and an OB US fetal age test showing that the fetus now weighed 8 lbs. 8 oz, or 3851 gms, well beyond the 90th %ile at 36 weeks. It would be more than reasonable to assume that by 39 weeks, with the average expected fetal weight gain of 250-375gms per week that this fetus would be well over the 4200-4500gm level at which the standard of care would require that unlabored cesarean be at least discussed, if not recommended. Most importantly, the ration of head to abdominal circumference is now under 0.92 (0.85 by my calculations), indicative of an increased risk of shoulder dystocia. Because this scan was not ordered to be performed by an MFM provider, this value was not reported. Because this data was not appreciated by the ordering physician, this risk was not recognized. Because this risk was not communicated to the patient, counseling was not performed, cesarean was not recommended, and informed consent for trial of labor was not obtained. Each of these represents a distinct and equally significant deviation from the standard of care that is directly responsible for the eventual shoulder dystocia resulting from this care.

It appears that the patient is being seen weekly for OB follow-up and nonstress testing. However, visits are only documented at 35 and 37 weeks' gestational age. At the 37-week visit the patient is introduced to the concept of induction of labor. Her blood pressure at this visit is 145/99. She has 2+ protein at this visit. No blood work appears to have been sent at any point in pregnancy for the evaluation of preeclampsia, according to the standard of care. It is notable that the only physician this patient sees for the entirety of her pregnancy is Dabney Hamner. At each visit, the standard of care was breached because her blood pressure was properly evaluated when elevated, and her blood sugars were not evaluated at all. Simply put, the high-risk nature of the pregnancy and its complications was not appreciated by the sole practitioner to see

her, and there was in adequate consultation obtained with those who would have been trained or had the experience to do so. As a direct result of this lack of consultative expertise, this patient's testing was inadequate to prevent complications, and while monitoring of fetal size was performed, the reporting was inadequate due to where the scan was performed, and its implications for route of delivery remained unrecognized, without discussion documented as to route of delivery.

Induction was scheduled at 37 6/7 weeks. The reasoning for indication for delivery prior to 39 weeks is not documented, representing another deviation from standard of care, and a quality metric that most systems will make note of. Review of hospitalization records reveal no discussion with regard to expected fetal weight, delivery complications, or options for route of delivery, according to the standard of care. Induction results in the delivery of a massively overgrown child. To be clear, this deviation standard of care is directly responsible for the events that follow. The estimated fetal weight at 36 weeks, and particularly the finding of disproportionate growth indicative of increased risk for shoulder dystocia should have triggered a discussion with the patient and could have even at that point been enough to offer unlabored cesarean. She was at great risk for fetal overgrowth, and this risk was not managed, mitigated or anticipated, according to the standard of care. With such an ultrasound, fetal weight estimates over 4200-4500 grams in a diabetic are indications for unlabored cesarean delivery to avoid risk of shoulder dystocia and permanent injury to the offspring, according to the standard of care. None of this was done, and the patient was allowed to deliver vaginally. Again, this is a blatant disregard for standard of care, or patient safety it is supposed to protect. Birth weight was 10 pounds 15 ounces (4970 g). A shoulder dystocia was not surprisingly encountered at the time of delivery. Documentation of maneuvers performed include McRoberts, suprapubic pressure, and wood's screw. While

documentation is not precise, the time between delivery of the head and shoulder appears to be 2 minutes. The baby's Apgars were 3 and 7.

Delivery hospitalization charting indicates ultrasounds done in the third trimester at Baptist Desoto, at 34 weeks and 36 weeks, should have indicated large for gestational age. Those reports appear to be missing from the Dr. Hamner's record. If they do exist, this data does not appear to have been acknowledged by Dr. Hamner, or discussed with the patient prior to beginning induction, according to the standard of care.

After review of relevant records, it appears that there were several opportunities to intervene on behalf of the well-being of this offspring, and pertinent deviations from any standard of obstetric care. These deviations would be recognized by any competently trained reasonably prudent minimally competent obstetrician.

1: Management of obesity in pregnancy–the patient presented with a BMI ³40, classifying as class III obesity by World Health Organization definitions. With a BMI ³50, she qualifies as "super obese" as defined by surgical literature. Standard management of this pregnancy should have included early counseling and consultation by subspecialty trained maternal-fetal medicine physicians, endocrinologists, diabetes educators, dieticians, or at the very least a discussion with regarding the risks of pregnancy complicated by this condition by her obstetrician. Furthermore, these pregnancies have been shown to be at increased risk for third trimester fetal death or complications and should be managed with weekly nonstress testing with or without ultrasound fluid evaluation beyond 33-34 weeks. While a glucose challenge was not given early in pregnancy, the suitable substitute of an A1c was sent and indicated glucose intolerance in this patient.

The patient was also at risk for third trimester complications of pregnancy including hypertensive diseases and delivery complications such as shoulder dystocia based on her BMI alone. There was no counseling to this effect, as required by the standard of care. The lack of attention paid to Ms. Wren's BMI directly results in a macrosomic fetus being allowed a trial of labor that culminated in a shoulder dystocia and newborn injury. But for this negligence, the dystocia and other injuries would have been avoided.

2: Early diagnosed gestational diabetes of this patient was diagnosed with glucose intolerance prior to 20 weeks gestational age. While by definition gestational diabetes as it is discovered in pregnancy, it is unlikely that this is in fact not undiagnosed pre-gestational glucose intolerance. As such management with oral hypoglycemics in the face of increased fingerstick blood glucose levels is inappropriate and breaches the standard of care. Oral hypoglycemics alone have not been shown to be successful in regulating blood glucose during pregnancy or achieving meaningful euglycemia when attempted in pre-gestational diabetics. The fetal overgrowth, and resulting massive macrosomia seen at delivery is a direct result of poor blood sugar control secondary to this inadequate management. Referral to subspecialty care was required according to the standard of care, and failure to refer her is a breach of the standard of care. The lack of attention paid to Ms. Wren's glucose intolerance directly resulted in the macrosomic fetus being allowed a trial of labor that culminated in a shoulder dystocia and other newborn injuries. But for this negligence, the dystocia and other injuries would have been avoided.

To be clear, the delivery of a macrosomic infant as well as the infant's shoulder dystocia and other injuries are direct result of the lack of intervention on the behalf of her primary obstetrician to manage either her obesity or her glucose intolerance in addition to the act of allowing a trial of labor. The failure to follow management standards requiring a recommendation

for cesarean delivery of macrosomic infant, but instead allowing a vaginal delivery directly resulted in this shoulder dystocia and subsequent newborn injuries. The purpose of a third trimester ultrasound is to plan the route of delivery. The records do not show where Dr. Hamner ever discussed these facts with Monica prior to allowing her to deliver her macrosomic infant via vaginal delivery which is a breach of the standard of care.

Contrary to the standard of care, induction of labor and an attempted vaginal delivery were allowed even with the assessment of fetal size in the third trimester showed a likely macrosomic, as well as asymmetrically grown fetus. As a direct result of this trial of labor, a shoulder dystocia was encountered with subsequent newborn injuries occurred.

A brief discussion is appropriate with regard to the patient's documented "noncompliance". While there may have been barriers to patient participation in her care, and as obstetricians we strive for partnership in the management of pregnancy, with a shared outcome of healthy mom and child, barriers to such a partnership are not solely the responsibility of the patient. The patient does not appear to have been given choices with regard to the management of obesity, diabetes, or in fact delivery as required by the standard of care. It is unclear as to whether the patient was fully informed as to the consequences of the choices she was making, which is required by the standard of care.

The following deviations from the standard of care directly caused the shoulder dystocia and subsequent newborn injuries in this case:

1. Failure to obtain early consultation with Maternal Fetal Medicine and early diabetic teaching;

2. Failure to monitor fetal growth after 22 weeks until 34 weeks with assessments of "Obesity affecting pregnancy" and "Gestational diabetes mellitus affecting pregnancy";

3. Lack of medical management of likely pregestational diabetes without insulin;

4. Inadequate monitoring of blood sugar control; and

5. Induction of labor even with knowledge of a macrosomic infant prior to induction.

Other deviations are noted in the record, but do not directly result in damage:

1. Inadequate frequency of fetal monitoring; and

2. Failure to investigate third trimester hypertension for possible severe preeclampsia.

Each of the above seven (7) items was required by the standard of care for the reasonably prudent, minimally competent obstetrician.

In addition, the ongoing lack of informed consent with regard to risks/benefits and alternatives to care in pregnancy and route of delivery are breaches of the standard of care that have an impact on this case. Had the patient been fully informed as to her risks, a more productive partnership and improved blood sugar control likely would have been achieved. Had she known her child was macrosomic, Ms. Wren likely would have opted for cesarean delivery and avoided this outcome. Knowledge is power, and this patient was given none.

While casual observation may have difficulty in raising suspicion of LGA in the super obese gravida, I find it difficult to imagine that anyone with a day of experience in obstetrics would have not been at least curious if not concerned as to the size of this fetus the day she presented for induction. To proceed with induction of labor without this data is clearly a breach in the standard of care, and anyone who didn't raise this question who was involved in her care is complicit.

I offer these opinions to a reasonable degree of medical certainty. I believe any similarly trained reasonably prudent minimally competent practicing obstetrician under similar circumstances would have recognized the need for early consultation, co-management, ultrasound monitoring of fetal growth and cesarean delivery in lieu of any attempt at trial of labor. Failure to follow these standards in this case, and the shoulder dystocia and other birth injuries that resulted

from this failure are directly responsible for these injuries. I reserve the right to modify this opinion as more records are made available for review.

Yours very kindly,

Hugh M Ehrenberg MD