

## Project 2.1.5 Maternal and Child Health – Medical History 1

**Patient: Judy Smith**

**Date of Birth: 10/10**

### **Patient History:**

Judy Smith is a 38-year-old woman in good health in the 10<sup>th</sup> week of her pregnancy. She has had two previous pregnancies, both without complications. Judy has questions and concerns related to screening and diagnostic tests available to learn more about the health of their unborn child. Many of these tests were not available during her previous pregnancies.

### **Notes – Visit #1**

Patient is 10 weeks, 3 days into the pregnancy. She complains of slight morning sickness and fatigue, but otherwise reports feeling fine. Physical exam is normal. Blood pressure is 125/70. Fetal heart rate was detected at a rate of 160 bpm.

### **Recommendations:**

Judy Smith should go to receive a noninvasive prenatal screening test for a variety of reasons. First, it is unsure of her beliefs religiously or morally to which tests she wants to have done, but this screening does not involve anything to a great extent. The test will simply determine if Mrs. Smith will need to go seek more prenatal care, 160 bpm for a fetus is good, but it is still on the higher side so it should be checked out. This test is also the only test that is offered to pregnant women at week 10, so it seems like the best decision.

## Project 2.1.5 Maternal and Child Health – Medical History 2

Patient: Judy Smith

### Notes – Visit 2 – First Trimester Screening

Judy Smith chooses to have a nuchal translucency (NT) ultrasound completed at 13 weeks, along with the first trimester screening blood tests. Her ultrasound is shown in the image on the right (left image shows a normal measurement). Ultrasound imaging shows an NT measurement of 3.6 mm (normal values are at or below 2.5 mm).



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Combined first trimester screening results come back as “abnormal” with a risk factor for chromosomal abnormalities of 1/100.

### Recommendations:

Mrs. Smith should go get a CVS, otherwise known as chorionic villus sampling test done. This is because the timeline would align with the time women usually get CVS testing done. There has been early detection of a risk factor of chromosomal abnormalities, which is one of the main focuses in this type of testing. It will get cells from the placenta to test to see what could possibly be causes the abnormal screenings.

## Project 2.1.5 Maternal and Child Health – Medical History 3

**Patient: Judy Smith**

### Notes – Visit 3 – Amniocentesis

Judy Smith chooses to have amniocentesis during the 16<sup>th</sup> week of her pregnancy. The procedure goes well and there are no complications to the fetus. Chromosomal analysis reveals the following karyotype.



### Karyotype Analysis:

A karyotype essentially is an analysis of a person's chromosomes, and it is used to search for abnormalities in the number or structure of chromosomes. This will be able to determine possible genetic disorders that the fetus may have. It also shows the process in which cells divide, also known as meiosis, that could have led to a chromosomal error. Given this set of chromosomes, it can be determined that Mrs. Smith's baby is a boy due to the X and Y chromosomes. The karyotype here looks fine because there are two chromatids per number.

## Project 2.1.5 Maternal and Child Health – Medical History 4

**Patient: Judy Smith**

### **Notes – Visit 4**

Patient is 17 weeks, 2 days pregnant. She is relieved to hear that her amniocentesis results are normal. Judy is advised to return for regular ultrasound examinations and for monitoring of her weight, blood pressure, and glucose levels.

Judy reports taking a prenatal vitamin each day and maintains a healthy diet. Her blood pressure was slightly elevated this visit at 145/80.

The patient will return in three weeks for her full anatomy scan.

### **Recommendations:**

Mrs. Smith should reduce her sodium intake, as well try to go on a walk several times in her day. This can be done in short intervals, but it is in an effort to not strain her body while also getting exercise. She should as well fix her diet a bit, or ask her health care provider to provide her with medication in order to not further strain her body. Staying hydrated would also be beneficial for her. Her cholesterol should be monitored and balanced with vegetables and fruits.

### **Notes – Visit 5 – Anatomy Ultrasound**

The 20-week anatomy ultrasound shows no abnormalities (see video in file). The fetus was very active during the session.



Everything looks normal, Mrs. Smith should continue her balanced intake and take care of herself for the next visit.

### Notes – Visit 6 - Glucose Tolerance Testing

At 26 weeks, Judy completed the one-hour glucose challenge screening and the results were just outside of the normal range. For this reason, the patient was asked to complete the three-hour Glucose Tolerance Test (GTT) screening.

Patient completed GTT at the end of the 27<sup>th</sup> week. After a baseline blood draw, Judy drank the provided glucose solution. Her blood was drawn one hour later, two hours later, and again after three hours.

Glucose Tolerance Testing results are shown below:

Interval	Blood glucose level
Fasting	80 mg/dl
One hour	175 mg/dl
Two hour	160 mg/dl
Three hour	130 mg/dl

### Analysis and Recommendations:

All the ranges except the two hour interval fall under the normal range for this test. The normal range for blood sugar at two hours should be 155 mg/dl or lower in order to be considered normal, however in Mrs. Smith's case she has 160 m/dl. This means during this period, her body has not been able to efficiently use glucose. There must be a

change in diet in order to reduce all risks of developing a severe case of gestational diabetes. She should carefully monitor her sugar intake, and prepare to go through the test again to ensure it was fixed in the future. If it comes back abnormal the second time, she will be diagnosed with GD and will have to discuss plans about treatment. Sweets, sodas, and high sugar food items will have to be strictly limited. Plenty of fresh fruits and vegetables should help ensure her and her baby are safe.