Tracking weight gain, blood pressure, and glucose metabolism during pregnancy.

**Background:** Excessive weight gain during pregnancy is a risk factor for the development of pregnancy-induced hypertension, gestational diabetes, and eventual maternal type-2 diabetes and metabolic syndrome post-pregnancy. The American College of Obstetricians and Gynecologists (ACOG) has endorsed the recent Institute of Medicine (IOM) updated guidance on weight gain during pregnancy modified by pre-pregnancy Body Mass Index (BMI). The ACOG Research Department has initiated several studies examining practicing obstetrician-gynecologists’ knowledge, opinions, and practices with regard to these new guidelines.

This new study will utilize a small network of practicing physicians that have agreed to participate in patient-centered research by collecting data from patient records as well as distributing surveys to patients. The study will track the pregnancy weights of all pregnant patients in a practice through the postpartum visit, as well as any data on blood pressure and blood glucose/glucose metabolism that are collected on the patients during pregnancy and at the postpartum visit.

*The goals of this study* are 1) to determine the proportion of pregnant women who gain the appropriate amount of weight based on their pre-pregnant or early-pregnant (first trimester) BMI, and 2) to examine the associations between pre-pregnant or early pregnancy BMI, pregnancy weight gain, blood pressure, and glucose metabolism during pregnancy and in the immediate postpartum period (first postpartum visit).

**Data collection:** Patients recruited into the survey portion of this study will be asked to fill out one short survey at the time of any of their prenatal visits. The survey will provide demographic data on patients and ask a few questions regarding their knowledge and opinions regarding weight gain during pregnancy, their risks of developing diabetes either during or after pregnancy, and the importance of monitoring their glucose metabolism during and after pregnancy.

At every prenatal visit we are asking the participating sites to provide the following data for patients recruited into the study: estimated gestational age; maternal body weight; maternal blood pressure; and whether any glucose screening was performed, and if so what was the result.

At the first postpartum visit we are asking the participating sites to provide the following data for patients recruited into the study: exam date; infant birth date; maternal body weight; maternal blood pressure; and whether any glucose screening was performed, and if so what was the result. Physicians participating in the study will fill out a postpartum check list documenting the health care services provided to the patient at the first postpartum visit.

Finally, participating physicians will complete a provider survey on their own knowledge and practices concerning weight gain during pregnancy, and the site(s) lead physician will fill out a brief site(s) demographics and characteristics survey.
**Expected outcomes**

1) A large database of information on pregnant women from multiple medical facilities across the United States concerning: pre-pregnancy or early-pregnancy height and weight (to calculate body mass index or BMI), longitudinal data on each woman’s weight gain through pregnancy allowing calculation of weight gain trajectory for different trimesters as well as total weight gain, fine grained information on blood pressure throughout pregnancy linked to the weight data, and information on glucose screenings during pregnancy identifying women with normal glucose metabolism, possibly impaired glucose regulation, or actual gestational diabetes mellitus (GDM).

2) Follow-up information for those women who attend their postpartum visit on maternal weight, blood pressure, glucose metabolism, and an assortment of other medically relevant information (e.g. is the patient breastfeeding?). This follow-up information can also determine the percentage of women who actually attend their 1st postpartum visit at the participating sites.

3) Responses from participating physicians from all sites to a survey on knowledge, opinion and practice relevant to guidelines for weight gain during pregnancy modified by patient pre-pregnancy BMI. These data will be directly comparable to two previous surveys conducted on obstetrician-gynecologists by the ACOG Research Department; one before the new ACOG guidance was released and the second one year after.

4) Responses from patients to two surveys: one during pregnancy and one administered at the postpartum visit. The postpartum visit survey is still in development.

**Addendum: 22 May 2014**

We have decided not to include a postpartum visit survey for patients; however we are giving each individual site the option of designing one if there are specific questions site staff may be interested in querying their patients on. We would create the final survey for sites interested in pursuing a second survey. Data collected from this survey would be specific to the site that administered it.