

Consent and Authorization Document

Research Study Title: A Randomized Trial of Continuous Positive Airway Pressure (CPAP) for Sleep Apnea in Pregnancy (SLEEP)

Sponsor: This research is being funded by <<Sponsor Name>>.

STUDY SUMMARY

We have summarized the key information about this research study at the beginning of this consent document. More complete details are included following this summary.

We invite you to take part in a research study because you have mild or moderate sleep apnea. Sleep apnea is a common sleep disorder in which you have one or more pauses in breathing or shallow breaths while you sleep. It is your choice whether to be in the study.

The purpose of the study is to find out if treating sleep apnea will affect certain disorders that happen during pregnancy and other complications during pregnancy. The study will last throughout your pregnancy and will finish after delivery of your baby. Everyone in the study will answer questionnaires and have blood taken at study visits. You will either be assigned to a treatment group that uses a CPAP machine or another group that gets advice about getting good sleep. What group you will be in is decided by chance, like flipping a coin. We will be following-up with you by phone, text messages or e-mail in between study visits. After you deliver your baby, we'll ask to take a tissue sample from the placenta. The procedures will be described in more detail later in this document.

There are some risks and discomforts from the blood draw and if you use the CPAP machine. There is a risk of loss of confidentiality. There are also All the risks will be described in more detail later in this document. You may benefit from being in the study, but there is no guarantee of benefits. You might help others in the future by being in this research study.

You can get standard care for your pregnancy or sleep apnea even if you decide not to be in this study.

You may take this document home to read or to discuss with your family members or doctor before deciding to take part in this research study. Please take your time and read this information carefully. You should ask the research staff if you have any questions about this study, or if there is anything you do not understand. If you decide to take part in the study, you will be asked to sign this form.

BACKGROUND AND PURPOSE

Sleep apnea is a common sleep disorder in which you have one or more pauses in breathing or shallow breaths while you sleep. Continuous Positive Airway Pressure (CPAP) is a treatment that uses mild air pressure to keep the airways open during sleep. It consists of a mask that fits over the nose and mouth. The mask is attached to a machine that delivers air at positive pressure. This acts like a "splint" to prevent you from having breathing pauses or decreased breathing while sleeping.

Hypertensive disorders of pregnancy are diagnosed when a woman has high blood pressure and possibly other signs that her organ systems are not working normally. One of these signs is proteinuria (an abnormal amount of protein in the urine). It is not clear why some women develop a hypertensive disorder during pregnancy. Gestational diabetes is diagnosed when a woman has high blood sugar during pregnancy. Women with gestational diabetes have to make changes in their diet and/or start medications to help control their blood sugar levels.

The purpose of this study is to understand how CPAP for sleep apnea may affect hypertensive disorders of pregnancy and other complications of pregnancy such as gestational diabetes

STUDY PROCEDURES

First you will meet with the study nurse. You may ask as many questions as you like. If you decide to be in this research study, you will be asked to sign this form. At each clinic visit you will be asked to complete a questionnaire to determine your self-assessed sleep quality and daily activities. We will also ask general information about you such as age, medical history and marital status. Your height, weight, blood pressure, and neck will be measured. About two tablespoons of blood will be taken from a vein in your arm to test for markers of metabolism, heart, and blood vessel health. You will be paid for this blood draw.

You will be assigned either to CPAP treatment group or to advice on getting good sleep. The treatment you get will be chosen by chance, like flipping a coin. Neither you nor the study doctor will choose what treatment you get. You will have an equal chance of being given each treatment.

- If you are randomized to the Sleep Advice arm of the study: Study staff will review general sleep advice about getting regular and sufficient sleep. You will be provided with a written summary of this counseling. Names and contact information of local sleep specialists will be shared with you. If you have significant sleep disturbance or daytime sleepiness that you are concerned about, you will be encouraged to talk to your doctor about pursuing clinical testing. We will follow-up with you with monthly phone calls, text messages or emails (whichever you prefer) to see how you are doing.
- If you are randomized to CPAP treatment: You will get instructions on healthy sleep but you will also be set up with a CPAP machine. CPAP is used only at bedtime, during sleep. If you are randomized to CPAP you will meet with the study nurse to find a CPAP mask that is comfortable for you. You will be taught how to use and care for your CPAP device. You will start using the machine and we will follow up with you by phone in 24-72 hours to see how you are doing and we will also schedule a follow-up visit within 7-14 days to address any problems or concerns you may be having trying to get used to using the machine. Members of the research team will follow up with you with phone calls, text messages or emails (whichever you prefer) to monitor CPAP use, and to see if you are having any problems with your machine. The CPAP machine contains a memory card and a cellular chip that will keep track of hours of machine usage. You will be paid if you use the CPAP machine regularly (at an average of at least 4 hours per night). You will also be asked if you would like to register for an online program, run by the manufacturers of the CPAP machine. It helps you keep track of your CPAP usage and therapy progress through the internet (with a computer or a smartphone). Registration for the program will require you to provide an email address and you can also provide a phone number. If you choose, the program can send you

automated messages via email or SMS messaging (text messaging) about your CPAP therapy.

Regardless of what group you are in, you will return for a study visit in the third trimester (26-30 weeks of pregnancy). You will get a second blood draw of about 2 tablespoons at this time. You will be paid for this blood draw. Your weight and blood pressure will be measured. If you are in the CPAP group you will bring in your machine and we will review how often you use your device. We will also ask you some questions about your experience with CPAP.

At the time of your delivery we will review you and your baby's medical records. We will collect some information about your delivery such as infant weight, vaginal delivery or cesarean, and about the baby's care in the hospital. After your baby is born we will take a sample of tissue from the placenta. This tissue sample would normally be discarded after delivery.

After delivery, will we ask you to complete a survey. This survey can be done on-line or over the phone. You will be paid for completing this survey.

After delivery you will also get a letter that summarizes your sleep study findings and encourages you to follow-up with a primary care doctor or sleep specialist.

We expect that you will be in this research study until the delivery of your baby.

RISKS

Although unlikely, it is possible that participation in this study could involve risks to you or your baby that are currently unknown.

Risks of CPAP

There is a rare risk of brief and/or minor discomfort associated with CPAP use. For example, you may experience minor skin discomfort from the CPAP mask. You may have nasal stuffiness, runny nose, nosebleed, or eye discomfort when using CPAP treatment. You may find that your mouth is more dry than usual during CPAP use. You may find breathing with CPAP uncomfortable at first and in this case a trained research team member will meet with you to understand why and assist with ways to help you feel more comfortable breathing with the CPAP mask in place.

Whether or not you get CPAP treatment, it is possible that you may continue to have sleepiness and snoring and that you will need to continue to be careful while driving a car or performing other activities where you or others could be injured. If your job requires you to disclose all medical diagnoses (for example if you are an airline pilot) you should notify them of your sleep study findings if they indicate that you have sleep apnea. If your employer requires that you be on treatment for sleep apnea, please notify the study team and you will be excluded from the randomized controlled trial and will be referred to a sleep specialist for further evaluation and treatment.

Risks of Answering Study Questions

There is minimal risk from answering the study questions. You do not have to answer any questions that you do not want to answer. You may stop answering questions at any time without affecting your medical care. All of your answers will remain confidential.

Risks of blood draw

There is a rare risk of infection associated with taking blood from a vein. There is a more common risk of bleeding, bruising, fainting or soreness at the site of the blood draw.

Risks of Collection of Medical Record Information

There is a minimal risk of breach of confidentiality regarding collection of medical record information. All research information about you will be handled in a confidential (private) manner consistent with other hospital medical records.

You and your insurance company will be charged for the health care services that you would ordinarily be responsible to pay. In some cases, insurance will not pay for services ordinarily covered because these services were performed in a research study. You should check with your insurance to see what services will be covered by your insurance and what you will be responsible to pay.

BENEFITS

We cannot promise any benefits to others from your taking part in this research as we do not yet know if CPAP can help you or your baby. However, if the study is successful, we may learn that CPAP can prevent conditions of hypertension during pregnancy and or other pregnancy problems that affect you and your baby. In addition, if the study shows benefit, CPAP treatment may be made available to other pregnant women. Therefore, your participation can potentially benefit mothers and their babies in the future.

ALTERNATIVE PROCEDURES

You have the option not be part of this study. If you do not take part, you will receive the routine treatment usually provided to women during and after delivery.

PERSON TO CONTACT

If you have questions, complaints or concerns about this study, you can contact Kim Hill at (801) 585-7645. If you think you may have been injured from being in this study, please call Michael W. Varner, M.D. at (801) 581-8425. Dr. Varner or one of his colleagues can be reached at this number 24-hours a day.

Institutional Review Board: Contact the Institutional Review Board (IRB) if you have questions regarding your rights as a research participant. Also, contact the IRB if you have questions, complaints or concerns which you do not feel you can discuss with the investigator. The University of Utah IRB may be reached by phone at (801) 581-3655 or by e-mail at irb@hsc.utah.edu.

Research Participant Advocate: You may also contact the Research Participant Advocate (RPA) by phone at (801) 581-3803 or by email at participant.advocate@hsc.utah.edu.

RESEARCH-RELATED INJURY

If you are injured from being in this study, medical care is available to you at University of Utah Health Care as it is to all sick or injured people. The University of Utah has not set aside any money to pay the costs for such care. The University will work with you to address costs from injuries. Costs for any treatment or hospital care would be charged to you or your insurance company (if you

have insurance), to the study sponsor or other third party (if applicable), to the extent those parties are responsible for paying for medical care you receive. Since this is a research study, some health insurance plans may not pay for the costs. By signing this consent form you are not giving up your right to pursue legal action against any parties involved with this research.

This medical institution and the <<sponsor>> have not made any provision for monetary compensation in the event of injury resulting from the research. In the event of such injury, treatment will be provided but it is not provided free of charge. Since this is a research study, payment for any injury resulting from your participation in this research study may not be covered by some health insurance plans.

The University of Utah is a part of the government. If you are injured in this study, and want to sue the University or the doctors, nurses, students, or other people who work for the University, special laws may apply. The Utah Governmental Immunity Act is a law that controls when a person needs to bring a claim against the government, and limits the amount of money a person may recover. See Section 63G -7-101 to -904 of the Utah Code.

VOLUNTARY PARTICIPATION

Participation in this research study is voluntary. You have the option to not be part of this study. If you do not take part, you will receive the routine treatment usually provided to women during and after delivery. Your decision to participate or not participate will not affect any other part of your care at this hospital. Refusal to take part or stopping participation will not result in any penalty or loss of benefits to which you are entitled. Your decision to take part or not take part will not affect your legal rights, available remedies or the quality of health care that you will receive at this hospital.

UNFORESEEABLE RISKS

There may be risks from taking part in this study that are not known to the researchers right now. They may find out new risks while the study is going on. If this happens, the research staff will tell you the new information, whether it may affect you, and what, if anything, to expect.

RIGHT OF INVESTIGATOR TO WITHDRAW

We expect to continue the study until all participants have been enrolled and all of their information has been collected. However, the study may be stopped at any time by the researchers at this institution or by the <<sponsor name>>. The researcher may also withdraw you from the study without your approval. One reason this may happen is because the researcher feels it is necessary for your health and safety. Another reason is if the entire study is stopped.

COSTS AND COMPENSATION TO PARTICIPANTS

There will be no cost to you to take part in the research study. All study-related equipment and procedures will be provided at no cost to you or your insurance company. The costs of your standard medical care will be billed to you or your insurance company in the usual manner.

You will receive compensation for your participation in this study, as follows:

- You will receive \$20 for each blood draw and \$20 for completing the survey at the end of the study.

If you are randomized to the CPAP group, you will also receive:

- \$10 for each week of compliance averaging CPAP use between 4-5.9 hours a night
Or
- \$20 for each week of compliance averaging CPAP use of 6 or greater hours per night.

Depending on the amount and method of compensation you receive, you may need to give us your social security number. You will give us this information on a W-9 Form that will be filed with our accounts payable department. The amount you get for being in this study may be turned in to the Internal Revenue Service (IRS) as taxable income. You can still be in the study and not give us your social security number. However, we will not be able to pay you as outlined in this consent form.

NEW INFORMATION

During the course of the study, we may find new information that could be important to you. This includes information that may cause you to change your mind about being part of the study. We will notify you if any significant new information becomes available which may affect your health, safety, or willingness to continue in this study.

During the study, we may learn something about your health that could help you and your doctors make decisions about your healthcare. If this happens, we will tell you about these results. We will contact you and make arrangements to discuss this with you.

NUMBER OF PARTICIPANTS

We expect to enroll approximately 225 participants at the University of Utah. We also expect to enroll 2700 participants at about 11 other hospitals across the country.

AUTHORIZATION FOR USE OF YOUR PROTECTED HEALTH INFORMATION

Signing this document means you allow us, the researchers in this study, and others working with us to use some information about your health for this research study.

This is the information we will use and disclose in our research records:

- Demographic and identifying information like name, address, telephone number, email address;
- Related medical information about you like medical record number, previous pregnancies, height, weight and whether you drink or smoke, current pregnancy complications including sexually transmitted infections and vaginal infections;
- Other information collected about you includes marital status, your level of education, type of medical insurance, and current pregnancy complications. Data will be collected on your labor (such as when it starts) and delivery, and treatment you need after delivery;
- Current sleep habits: sleep duration, daytime sleepiness, daily activities, work schedule, exercise, restless legs;
- Information will also be collected on your baby at delivery and on your baby's hospital stay;
- All tests and procedures that will be done in the study.

How we will protect and share your information:

- We will do everything we can to keep your information private but we cannot guarantee this. Study information will be kept in a secured manner and electronic records will be password protected. Study information may be stored with other information in your medical record. Other doctors, nurses, and third parties (like insurance companies) may be able to see this information as part of the regular treatment, payment, and health care operations of the hospital. We may also need to disclose information if required by law.
- **This** research is covered by a Certificate of Confidentiality from the National Institutes of Health (NIH). The researchers with this Certificate may not disclose or use information, documents, or biospecimens that may identify you in any federal, state, or local civil, criminal, administrative, legislative, or other action, suit, or proceeding, or be used as evidence, for example, if there is a court subpoena, unless you have consented for this use. Information, documents, or biospecimens protected by this Certificate cannot be disclosed to anyone else who is not connected with the research except, if there is a federal, state, or local law that requires disclosure (such as to report child abuse or communicable diseases but not for federal, state, or local civil, criminal, administrative, legislative, or other proceedings); if you have consented to the disclosure, including for your medical treatment; or if it is used for other scientific research, as allowed by federal regulations protecting research subjects.

The Certificate cannot be used to refuse a request for information from personnel of the United States federal or state government agency sponsoring the project that is needed for auditing or program evaluation by the NIH or for information that must be disclosed in order to meet the requirements of the federal Food and Drug Administration (FDA). You should understand that a Certificate of Confidentiality does not prevent you from voluntarily releasing information about yourself or your involvement in this research. If you want your research information released to an insurer, medical care provider, or any other person not connected with the research, you must provide consent to allow the researchers to release it.

- If we lose track of you, study staff may collect information from the internet including social network sites in order to find your contact information.
- Some de-identified data regarding your CPAP therapy (hours and dates of use) will be stored on a secure network managed by ResMed. The Sleep Reading Center (run jointly by the University of Pittsburgh and Brigham and Woman's Hospital in Boston).

Sampling for Genetic Testing

As part of the analysis on your samples, if you consent to having some of your blood and/or placenta sample made into DNA that would be used in future research, future investigators may do genetic testing. Genetic research is research that studies genes, including gene characteristics and gene versions that are transmitted by parents to children. Genetic research may include looking at information, such as personal appearance and biochemistry, gene sequences, genetic landmarks, individual and family medical histories, reactions to medications and responses to treatment. Genetic research raises certain questions about informing you of any results. Possible risks of knowing results include: anxiety; other psychological distress; and the possibility of insurance and job discrimination. A possible risk of not knowing includes being unaware of the need for treatment. These risks can change depending on the results of the research and whether there is a treatment

or cure for a particular disease. The results of the study of your samples from this project will be used for research purposes only, and you will not be told the results of the tests.

Sometimes patients have been required to furnish information from genetic testing for health insurance, life insurance, and/or a job. A Federal law, the Genetic Information Nondiscrimination Act of 2008 (GINA), generally makes it illegal for health insurance companies, group health plans, and employers with 15 or more employees to discriminate against you based on your genetic information. This law generally offers the following protections:

- Health insurance companies and employer-based group health plans may not request your genetic information that we get from this research.
- Health insurance companies and employer-based group health plans may not use your genetic information when making decisions regarding your eligibility or premiums.
- Employers with 15 or more employees may not use your genetic information that we get from this research when making a decision to hire, promote, or fire you or when setting the terms of your employment.
- All health insurance companies and group health plans must follow this law. All employers with 15 or more employees must follow this law as of November 21, 2009. The protections offered by GINA apply regardless of when the research that obtained the genetic information was conducted, even if prior to the effective date.

Be aware that this law does not protect you against discrimination on the basis of your genetic information by companies that sell life insurance, disability insurance, or long-term care insurance.

The information collected for this research study will be entered into an electronic database at the data coordinating center <<Data Coordinating Center name>>. The database has information from all of the participants. Your information in the database will only be used for statistical analysis and may appear in scientific publications but will not identify you. The information sent to the data coordinating center does not include your name, address, social security number, hospital number, date of birth or any other personal identifiers. Instead, the data center will use a unique code for each person consisting of a number and the first letter of your first name. The key to the code linking the data and samples to you will be kept here in a locked file. Only the research study staff employed for this study at this hospital will have access to the key to the code.

- **In** order to conduct this study and make sure it is conducted as described in this form, the research records may be used and reviewed by others who are working with us on this research:
 - Members of the research team and University of Utah Health
 - The University of Utah Institutional Review Board (IRB), which reviews research involving people to make sure the study protects your rights
 - Other local hospital(s) that we are working with: Intermountain Healthcare
 - The United States Food and Drug Administration (FDA) and/or the Office for Human Research Protections (OHRP).

- <<Sponsor Name>> which sponsors this study, including persons or organizations working with the sponsors, such as the data coordinating center, <<data coordinating center name>>.
- If we share your identifying information with groups outside of University of Utah Health, they may not be required to follow the same federal privacy laws that we follow. They may also share your information again with others not described in this form.
- A copy of your medical chart or your baby's medical chart also may be sent to research investigators at one of the other enrolling centers, the data coordinating center, or <<sponsor name>> for review. If your chart is sent, all identifying information, such as your name, address, social security number, hospital number, and date of birth first will be removed.
- The results of this research study will be provided to the sponsor, <<sponsor name>> (and/or its representatives). In addition, data from this study will be put in a public data set that will be available to other research investigators. This public data set will not contain any identifying patient data.
- Once the study is finished, you may request to have and review a copy of your personal health information collected during this study and placed in your medical record. This right to review and copy your personal health information only extends to information that is placed in your medical record; it does not extend to information that is placed in your research record.
- If you do not want us to use information about your health, you should not be part of this research. If you choose not to participate, you can still receive health care services at University of Utah Health.

What if I decide to Not Participate after I sign the Consent and Authorization Form?

- You can tell us anytime that you do not want to be in this study and do not want us to use your health information. You can also tell us in writing. If you change your mind, we will not be able to collect new information about you, and you will be withdrawn from the research study. However, we can continue to use information we have already started to use in our research, as needed to maintain the integrity of the research.

This authorization does not have an expiration date.

Consent for Sample Banking

As part of this study, we will put some of your blood and placental tissue in a tissue bank so that other researchers can use it in the future. We don't know what kind of future research will be done, but we hope to learn more about pregnancy related conditions and how to treat them. This may include genetic testing. The samples will be stored until they are used up, or for as long as deemed useful for research purposes and may be stored in off-site facilities. There will be no cost to you for any data or sample collection and storage.

The samples will be sent to a sample storage facility contracted by the National Institutes of Health (NIH), where they will be kept indefinitely and without information identifying you. The samples will

only be shared with researchers approved by the National Institutes of Health. An Institutional Review Board must also approve any future research using your samples. However, if the researchers decide that there is no more use for your samples, you agree that they may be discarded.

You samples will be coded so that your name is not on the samples. The researchers at NIH will not have the code to link your sample back to your name. Only researchers on this study at the University of Utah will have access to your identifiable information. We will keep your name in a separate place so that we can link your sample back to you later if we need to do so.

You do not have to participate in the tissue bank to be in the main part of this study. No matter what you decide to do, your decision will not affect your medical care. You can tell us your choice by **initialing** one of the choices below:

_____ Yes _My sample(s) may be saved for future research on pregnancy related conditions

_____ No_ My sample(s) must be destroyed at the end of this research project.

Please initial below to indicate whether or not you give permission for the study team to take a sample of your placenta after delivery.

YES _____ I **agree** to have a sample of my placenta stored for future research.

NO _____ I **do not agree** to have a sample of my placenta stored for future research.

Please **initial** below to indicate whether or not you give permission for future DNA research of your blood and/or placenta samples.

YES _____ I **agree** to have some of my blood and/or placenta sample made into DNA that would be used in future research.

NO _____ I **do not agree** to have some of my blood and/or placenta sample made into DNA that would be used in future research.

You can have your samples removed from this tissue bank later. You will need to contact <<PI Name>> at <<phone number>>.

If you give permission for your sample(s) to be saved for future research by the University of Utah or its research partners, the Institutional Review Board may review and approve each new project. The Institutional Review Board may require that you be contacted for your permission prior to the use of the sample(s) in a new project if it determines new consent is required for your protection.

Samples obtained from you in this research may help in the development of a commercial product by the University of Utah or its research partners. There are no plans to provide financial compensation to you should this occur.

Because the results from future research will not directly affect your health care, we will not share the results from future studies with you or your doctors.

Please **INITIAL** the appropriate statement to indicate whether or not you give permission for future contact.

YES _____ I give permission to be contacted in the future for research purposes.
(Please initial)

NO _____ I do not give permission to be contacted in the future for research purposes.
(Please initial)

CONSENT

I confirm that I have read this consent and authorization document and have had the opportunity to ask questions. I will be given a signed copy of the consent and authorization form to keep. **I agree to take part in this research study and authorize you to use and disclose health information about me for this study, as you have explained in this document.**

Participant's Name

Participant's Signature

Date

Name of Person Obtaining Authorization and Consent

Signature of Person Obtaining Authorization and Consent

Date