Consent of an Adult to Be in a Research Study

In this form "you" means a person 18 years of age or older who is being asked to volunteer to participate in this study.

Parents' or Guardians' Permission for Your Child to Be in a Research Study

Agreement of a Child to Be in a Research Study

Age 15 to <18

In this form "you" means the child in the study *and* the parent or guardian.

- ✓ If you are the parent or guardian, you are being asked to give permission for your child to be in this study.
- ✓ If you are the child, you are being asked if you agree to be in this study.

In this form, "we" means the researchers and staff involved in running this study at the University of Virginia.

Participant's Name_____

Principal Investigator: Stacey M. Anderson, MD
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Department of Endocrinology & Metabolism
Center for Diabetes Technology
Box 400888 Charlottesville, VA 22903

Sponsor: National Institute of Diabetes & Digestive & Kidney Diseases (NIDDK-NIH)

What is the purpose of this form?

This form will provide you with information about this research study. You do not have to be in the study if you do not want to. You should have all your questions answered before you agree to be in this study.

Please read this form carefully. If you want to be in the study, you will need to sign this form. You will be given a signed copy of this form.

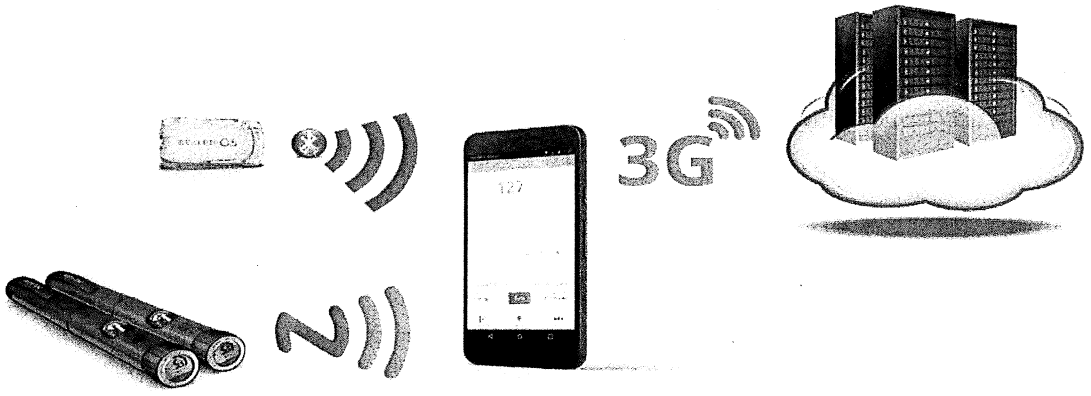

Figure 1: Study Technology

This will be the first study using the inControl Advice. The DSS prototype (example) has been tested in 30 adults with type 1 diabetes with both insulin pumps and MDI users.

You are being asked to be in this study because:

- You are at least 15 years old
- You have had Type 1 Diabetes Mellitus for at least 1 year
- Using basal and meal insulin for Intensive Insulin Therapy including carbohydrate counting and use of pre-defined parameters for glucose goal, carbohydrate ratio, and insulin sensitivity factor for at least one month.
- Willingness to use the study basal insulin (Tresiba) and meal insulin (Novolog) for the duration of the study.
- Willingness to use the home or DSS-optimized carbohydrate counting parameters for all meal dosing and enter the information into the inControl APP.

For the MAIN STUDY, up to 70 people will be in this study at UVA. Up to 160 people will be in this study at all places. A total of 132 subjects are needed to complete enrollment of this study.

Is there a possible conflict of interest?

When a person or an organization has a financial or other interest large enough to seem as if it could affect their judgment, it is called a conflict of interest. Members of this study team have a conflict of interest with this study. University of Virginia (UVa) faculty members invented some of the technology upon which this trial is based. If this technology leads to marketable products, UVa may receive compensation. UVa has a financial interest in the outcome of this study.

- Height and weight
- Standard blood tests (2 teaspoons of blood) to check certain salts, blood sugar, kidney function, liver function, blood counts, HbA1c (your blood glucose average over 8-12 weeks), Hematocrit (percentage of red blood cells in your blood), and thyroid levels (TSH). If you are female and of child-bearing potential, your blood sample will also be tested to find out if you are pregnant. This test must be negative in order to continue study participation. The results of the pregnancy test will be provided to you. Also, Virginia law requires release of the test results to your parent(s)/legal guardian if they request the results or request a copy of your medical records.
- The HbA1c will be collected sent to a laboratory outside of UVa.
- You may have these blood tests performed locally (i.e. LabCorp facility).
- You will be asked not to take medications containing acetaminophen (like Tylenol) 24 hours prior to wearing the continuous glucose monitor sensor and while you are wearing the sensor.
- **If female and sexually active, you must agree to use a highly effective form of contraception to prevent pregnancy while a participant in the study.** A negative pregnancy test will be required for all premenopausal women who are not surgically sterile prior to putting on study equipment. If you become pregnant during the trial, you will be discontinued from the study.

Insulin is not well tested in pregnant women. It is not known if insulin can result in birth defects or miscarriages. Please inform the study team immediately if you become pregnant during the study. If you are attempting to become pregnant, you should not participate in this study.

The study physician may ask that you repeat your screening lab tests. These tests may be conducted locally (e.g. LabCorp).

If the screening tests demonstrate you are eligible to participate in the MAIN STUDY:

- You will receiving training on the use of a blinded CGM and receive the appropriate supplies. You will wear the blinded CGM at home for approximately 2 weeks to obtain baseline glucose assessment.
- You will receiving training on the use of the study glucometer and receive the appropriate supplies. You will use the study glucometer for all fingerstick BG testing and calibrations during the trial. Do no use alternate testing sites.
- You will be asked to perform fingerstick BG testing according to the CGM manufacturer guidelines.
- You will be asked to perform fingerstick BG testing according to the Glycemic Treatment Guidelines as you will be asked to follow study guidelines for the treatment of low or high blood glucose.
- You will be provided a blood ketone meter and supplies to use as advised in the Glycemic Treatment Guidelines.
- You will use your home insulins dosed according to your pre-defined home parameters for carbohydrate counting.
- You will be asked to confirm that you have an emergency glucagon kit available at your home per usual care guidelines. Otherwise, the study physician will provide you a prescription to obtain this kit.

related to system performance and usability surveys on the DSS. These questionnaires will be administered at Visit 2 and Visit 9. Completion of these questionnaires will take about 60 minutes. You will use only your study identification number when completing these questionnaires. You will not use your name, date of birth, etc....

Visit 3-8: Telephone Phone Check Ins (Day 17-102/approximately 15 minutes) [Group A & B]

The study team will contact you during weeks 2, 4, 6, 8, 10 to review:

- your compliance with the study equipment
- your blood glucose values
- remind you to download the study CGM
- discuss any issues that you may have experienced
- Fingerstick BG at least 4 times daily during the first 2 weeks of using the study insulin (pre-meal and bedtime, for CGM calibrations, to confirm low or high CGM alarms, and for symptoms of low or high blood sugar).

END OF STUDY:

Visit 9: Study Conclusion Visit (Day 103/approximately 90 minutes) [Group A & B]

You will either come to the CRU or complete the following closer to home: HgbA1c and questionnaires. Data will be downloaded from study equipment by one of several methods: (a) you will download the equipment and send the files to study staff, (b) at the CRU by study staff; or (c) equipment mailed to the study team for downloading. You are required to return the study equipment, including unused insulin and its associated equipment.

The study physician will review the CGM data, and you will be instructed how to transition back to your home insulins and the doses to be used. There may be a risk of severe hypoglycemia and/or severe hyperglycemia during the transition back to your usual home basal insulin from the study basal insulin (Tresiba). We will be ask you to perform fingerstick BGs before meals, at bedtime, and at 3AM for the first 3 days on the home insulin.

Follow-up Phone Contacts for Both Groups: Post-study

A study team member will contact you within 3-7 days after initiating home insulin to assess for any problems transitioning from the study insulin to the home insulin, including any episodes of blood glucose values 300 mg/dL.

- You must not use acetaminophen (like Tylenol) 24 hours prior to wearing the continuous glucose monitor sensor and while you are wearing the sensor.

Specimens

Blood Testing

We will take (or "draw") up to 2 tablespoons of blood during the screening visit. The blood we taken at the screening appointment will be tested to measure your diabetes control, your thyroid function, how well your kidneys/liver work, the amount of certain salts and sugars, and to see if you are pregnant (females). When these tests are done, any remaining sample will be thrown away. It will not be stored for any future testing.

Hemoglobin A1c blood samples taken at Screening and at the Study Conclusion Visit will be processed at a laboratory not associated with UVa. This lab is called a Central Lab. Once the sample is processed, it will be discarded.

You will take fingersticks during the trial to measure your blood glucose levels. The physician may ask that you take more fingersticks to help monitor your glucose levels. Please note that if you access LabCorp, more blood will be taken than the UVa laboratory. No other blood sampling will be completed during the trial.

When these tests are done, any left-over sample will be thrown away or they will be de-identified. This means there is no information that could be used by anyone to determine who the sample came from.

If you want to know about the results before the study is done:

During the study, you are having an investigational test done. The purpose of the test is NOT to diagnose any disease or abnormality you may have. Because the test is investigational, there is no way for the study leader to understand if the results are "normal" or "abnormal". However, IF any test results are concerning, your study leader will let you know.

In addition, as the research moves forward, your study leader will keep you informed of any new findings about the research itself that may be important for your health or may help you decide if you want to continue in the study. The final results of the research will not be known until all the information from everyone is combined and reviewed. At that time, you can ask for more information about the study results.

What are the risks of being in this study?

Possible side effects that may occur during this study include:

Rarely:

- Swelling or redness at insertion site
- Psychological reaction to viewing the continuous glucose monitor information or attending to continuous glucose monitor alarms or fingerstick blood glucose values.
- Breakage of the continuous glucose monitor sensor under the skin with possible symptoms of skin irritation and inflammation. If a sensor breaks and no portion of it is visible above the skin, do not attempt to remove it. Please call the study team or seek immediate medical assistance. Seek professional medical help if you have symptoms of infection or inflammation – redness, swelling or pain – at the insertion site.

Risk of insulin pen use:

Likely:

- Inadequate mixing of insulin, leading to improper dosing

Less Likely:

- Leaving an insulin needle attached to the pen, contributing to air bubbles accumulating within the insulin and pen and leading to improper dosing of insulin or insulin contamination.

Rarely:

- Sharing insulin pens may result in a bloodborne pathogen (a bacteria or a virus that can cause disease)

Risks and side effects related to blood glucose collection via fingerstick:

Likely:

- Pain at site of lancet (finger-pricking needle) use
- Bleeding at site of lancet use

Less Likely:

- Incorrect information from a false low or false high fingerstick value

Rarely:

- Infection at site of lancet use

Risks associated with performing a serum (blood) or urine pregnancy tests females who are able to become pregnant):

Less Likely:

- False positive or false negative results

Risks of Videotaping/Audiotaping:

With your permission, we may photograph or videotape your participation in this trial. Photographs and videotapes will be used in presentations at conferences, potential study subjects, and potential research donors. Your willingness to have photos taken is independent of your participation in this trial. Your photo or videotape will not be used without your consent. Your identity can remain anonymous.

_____ Initials ☐ I agree to be photographed/videotaped during this trial.

_____ Initials ☐ I agree to be photographed/videotaped during this trial but would like to remain anonymous.

_____ Initials ☐ I do **NOT CONSENT** to being photographed/videotaped during this trial.

Risks for Women:

Pregnancy and Contraception

The study insulin used in this study can harm an unborn or nursing baby. Therefore, you cannot be in this study if you are pregnant or nursing a baby. A pregnancy blood test will be done at screening before starting this study if you are a woman able to become pregnant. You MUST NOT become pregnant while on this study.

You and your partner must use an approved form of birth control during this study. Examples of birth control you may use are:

- Birth Control Implant
- IUD (intrauterine device)
- Depo-Provera
- Birth Control Pills
- Birth Control Patch
- Sterilization

The birth control methods listed below are less effective. They may be used if combined with other birth control methods:

- Condoms
- Jellies or foam
- Withdrawal
- Sponge
- Diaphragm
- Rhythm
- Cervical cap

Ask your doctor for more details about the proper birth control method for you. If you become pregnant during this study, you must tell your doctor right away. Your doctor will discuss your treatment and the effect on the pregnancy.

Will being in this study cost you any money?

Being in this study will not cost you any money. Your insurance company will also not be billed.

The following procedures/tests, which are being done for research purposes, will be provided at no cost to you or your health insurance: lab tests, study insulin, study equipment, study visits, or hotel (if applicable).

You and/or your insurance company must pay for any tests or care given beyond what is required in this study. In addition, you and/or your health insurance may also have to pay for other drugs or treatments that are given to help you control any side effects. You will have to pay for any costs not covered by your health plan. You may be responsible for any co-payments or deductibles. You may wish to ask your insurance company for an estimate of what these costs might be or if pre-approval is required.

You will be responsible for the cost of travel to come to any study visit. All of the research facilities have an appropriate parking lot where free parking is available.

What if you are hurt in this study?

You do not give up any legal rights, such as seeking compensation for injury, by signing this form. If you feel you have been injured as a result of this study you may contact the Principal Investigator or the IRB (phone numbers are located near the end of this form). If you are hurt as a result of being in this study, there are no plans to pay you for medical expenses, lost wages, disability, or discomfort. The charges for any medical treatment you receive will be billed to your insurance. You will be responsible for any amount your insurance does not cover.

What happens if you leave the study early?

You can change your mind about being in the study any time. You can agree to be in the study now and change your mind later. If you decide to stop, please tell us right away. You do not have to be in this study to get services you can normally get at the University of Virginia.

Even if you do not change your mind, the study leader can take you out of the study. Some of the reasons for doing so may include

a) Your study physician is concerned about your health
b) Your condition gets worse
c) The side effects of the study procedures are too dangerous for you
d) New information shows the study procedures will not work or is not safe for you
e) You do not follow your doctor's instructions
f) The study sponsor (i.e. NIH) closes the study for safety, administrative or other reasons

The information collected from you might be published in a medical journal. This would be done in a way that protects your privacy. No one will be able to find out from the article that you were in the study.

A description of this clinical trial will be available on *http:// www.ClinicalTrials.gov,* as required by U.S. Law. This Web site will not include information that can identify you. At most, the Web site will include a summary of the results. You can search this Web site at any time.

What if you sign the form but then decide you don't want your private information shared?

You can change your mind at any time. Your permission does not end unless you cancel it. To cancel it, please send a letter to the researchers listed on this form. Then you will no longer be in the study. The researchers will still use information about you that was collected before you ended your participation.

A copy of this consent form will be put in your medical record. (This is not the same as the record of this research study.) This means that everyone who is allowed to see your medical records will be able to find out that you are in this study. This is done so your regular doctors will know what you receive as part of this study. If you have other health problems during the study, they will be able to treat you properly.

Please contact the researchers listed below to:

- Obtain more information about the study
- Ask a question about the study procedures or treatments
- Report an illness, injury, or other problem (you may also need to tell your regular doctors)
- Leave the study before it is finished
- Express a concern about the study

Stacey M. Anderson, MD
University of Virginia
Department of Endocrinology & Metabolism
Center for Diabetes Technology
Box 400888 Charlottesville, VA 22903
Telephone: 434-982-0945

What if you have a concern about this study?

You may also report a concern about this study or ask questions about your rights as a research subject by contacting the Institutional Review Board listed below.

University of Virginia Institutional Review Board for Health Sciences Research
PO Box 800483

Person Obtaining Assent of the Child (less than 18 years of age)
Consent from the parent/guardian MUST be obtained before approaching the child for their assent.

By signing below you confirm that the study has been explained to the child (less than 18 years of age), all questions have been answered and the child has voluntarily agreed to participate.

PERSON OBTAINING ASSENT (SIGNATURE)	PERSON OBTAINING ASSENT (PRINT)	DATE

Parental/ Guardian Permission

By signing below you confirm you have the legal authority to sign for this child.

PARENT/GUARDIAN (SIGNATURE)	PARENT/GUARDIAN (PRINT NAME)	DATE

Person Obtaining Parental/Guardian Permission

By signing below you, confirm that you have fully explained this study to the parent/guardian, allowed them time to read the consent or have the consent read to them, and have answered all their questions.

PERSON OBTAINING PARENTAL/ GUARDIAN PERMISSION (SIGNATURE)	PERSON OBTAINING PARENTAL/GUARDIAN PERMISSION (PRINT NAME)	DATE