Title of Study: Positive Airway Pressure For The Treatment Of The Obstructive Sleep Apnea Syndrome In Children With Down Syndrome
Principal Investigator: Dr. Ignacio Tapia
Department: Pediatric Pulmonary

Phone Number*: 305.243.6641(24hrs number)*
NCT04132999

You and your child may be eligible to take part in a research study. This form gives you important information about the study. It describes the purpose of this research study, and the risks and possible benefits of participating.

In the sections that follow, the word "we" means the study doctor and other research staff. If you are a parent or legal guardian who is giving permission for a child, please note that the word "you" refers to your child and to you as the parent/guardian.

Study Overview

You are being asked to take part in this research study because your child has Down syndrome and obstructive sleep apnea syndrome (OSAS), meaning your child's breathing may stop and start up again while sleeping, and your child is being clinically referred for positive airway pressure (PAP) to treat OSAS.

The purpose of this research study is to evaluate the effect PAP use on quality of life, neurobehavioral functioning, and healthcare utilization in children with DS and OSAS.

You will be asked to come to UM for five (5) daytime study visits that will each last about 1 to 3 hours. In addition, 1 overnight titration sleep study while using your PAP device. If you take part, you will be asked to:

- Meet with the study team.
- Complete behavioral assessments
- You as the parent/guardian will complete questionnaires.
- Have 1 overnight titration sleep study while using your PAP device.

The main risks of this study are from the behavioral assessments. These include fatigue and embarrassment. You might benefit directly from participation in this study through improved use of PAP.

If there is anything in this form you do not understand, please ask questions. Please take your time. You do not have to take part in this study if you do not want to. If you take part, you can leave the study at any time. If you do not choose to take part in this study, you can discuss treatment options with your doctor.

Please see below for additional details about the study.

If you agree to take part, your participation will last approximately one year.

How many people will take part?
About 100 people will take part in the study, including approximately 50 participants from UM.

What are the study procedures?

Some of the procedures in this study will be repeated several times. Tests that are part of your regular, routine medical care will continue to be performed. Additional tests may be performed if any of your initial test results are not normal. The study involves the following tests and procedures.

(A) Screening

Review of Medical Records: First, to see if you are eligible for this study, your medical records will be reviewed to be sure that you do not have any medical conditions or are on any medicines that could interfere with this study. If you are not eligible for this study, you will not complete any of the study procedures listed below. Information such as medicines used, past medical problems and surgeries will be reviewed. We will continue to review your medical records throughout the study if you are eligible.

(B) Randomization

You will be put into one of the study groups talked about below. "Randomly" means you are put into a group by chance. It is like flipping a coin. A computer will choose which group you will be in. You will have an equal chance of being in either group. Your study doctor will not know which group you are in until after the study is finished.

- *Standard Care **(SC)**:* One group will receive usual clinical care that is what is typically provided at medical teams in pediatric sleep centers.
- *Family-informed Intervention **(INT)**:* The second group will have multiple face-to-face visits and phone calls and visits with the PAP psychologist and medical team.

Children in both groups will be given sleep and health information.

(C) Baseline Tests

Physical exam: This will include height, weight and blood pressure.

Behavior tests and assessments: You will do some tests of concentration and coordination. These include a video game and putting pegs into a board. Parents will be in a different room and will fill out questionnaires about your sleep and behavior while you are being tested. You will also be asked to complete assessments that test your behavior, thinking, memory and development. The tests may take up to 30 minutes. Please note that if your tests show severe depression or suicidal feelings (like wanting to hurt yourself on purpose), your family will be notified, and you will be referred for further help.

Caregivers' questionnaires: We will ask your caregiver/parent to fill out some brief questionnaires about your behavior and sleep. You as the parent/guardian will also fill out some questionnaires about your health knowledge and situations that may cause trouble or stress in the family. These may be completed in person or virtually. Parents of children participating in the study who are employees of UM will not have study data and survey responses shared with their supervisors.

Titration sleep study using your PAP device**:**

If you have a clinically indicated titration sleep study using your PAP device between 1 month and 3 months, the study will send to the reading center at Brigham and Women's Hospital at Harvard Medical Center for standardized scoring. The reading center will not be given your name.

If you have not had a clinically indicated titration sleep study using your PAP device, you will have a titration sleep study using your PAP device as part of the research.

- A number of small patches will be placed on the skin on your head, face, chest, and legs. These patches will be connected by wires to machines in a separate monitoring room to monitor your breathing, heart rate, and sleep stage.
- You will wear stretchy belts around your chest and abdomen and a small tube under your nose to measure your breathing.
- According to the routine practice of the sleep laboratory, you may also be videotaped during the sleep study to help understand your breathing and sleep patterns. Videotapes are not used for research.
- Your parent or other adult caregiver will sleep in the same room as you.

(D) Treatment groups

Standard Care (SC): Participants in this group will receive usual clinical care that is what is typically provided by medical teams in pediatric sleep centers. At the initiation visit you will meet with the physician, nurse, and respiratory therapist to discuss the diagnosis and treatment with PAP. You will be taught how to use and take care of your PAP device. This visit may be completed in person or virtually. You will be provided hand-outs on recommended amounts of sleep, healthy sleep habits, positive parenting strategies, and desensitization.

Family-informed intervention (INT): Participants in this group will have multiple face-to-face visits in person or virtually and phone calls and visits with PAP psychologist and physician, nurse, and respiratory therapist. The psychologist will learn more about your sleep habits and

develop a plan with you and your caregivers for improving sleep and using PAP. You will also be taught how to use and take care of your PAP device.

(E) Follow up phone calls

Participants randomized to intervention **(INT)** will receive follow-up phone calls from the psychologist at weeks 1, 2, 6, 8, 10, 14, and 20. Participants randomized to **(SC)** will receive the phone number of the study Sleep Clinic nurses to call with any questions. For both groups, the research coordinator will make monthly phone calls, starting at month 2 through month 11.

(F) Semi-structured Caregiver and subject Interviews: At the 6 Month and 12 Month v visit we will interview caregivers and subjects to explore such key constructs as knowledge/belief about OSAS and PAP therapy, routines and resources that promote or limit PAP use, barriers, self-efficacy, and communication and attitudes about PAP. This interview will take approximately 20 minutes. Care will be taken not to use identifying information during the interviews.

Visit Schedule
Please see the table showing all the study visits. You will have study visits at 6 and 12 months to see how you are doing and to repeat some of the tests that were done at the beginning of the study.

Visit	Purpose	Main Procedures	Duration
Visit 1	Screening and baseline	Consent, randomization to study group, medical record review, physical exam, neurobehavioral assessments and questionnaires. PAP initiation (on same date or within two weeks of neurobehavioral assessments).	2 to 3 hours
Visit 2, Month 1	PAP adherence	Physical exam, equipment check and download and feedback about use of PAP.	30 minutes

Phone calls INT group (weeks 1, 2, 6, 8, 10, 14, 20)	Support in implementing PAP	Assess the family's report of progress, make changes to behavioral plan if needed, and offer support and encouragement.	5 to 15 minutes
Phone calls both groups (month 2 thru 11 month)	Retention	Healthcare utilization assessment.	
Between 1 and 3 Month visit	PAP titration sleep study	Will be performed as part of research unless clinically indicated	overnight
Visit 3, Month 3	PAP adherence	Physical exam, equipment check and download and feedback about use of PAP.	30 minutes
Visit 4 at 6 Months		Neurobehavioral assessments, questionnaires, equipment check and download,feedback about use of PAP and semi-structured interviews. Transition to clinical care.	2 to 3 hours
Visit 5 at 12 Months	Final visit	Neurobehavioral assessments, questionnaires, healthcare utilization and semi-structured interviews.	2 to 3 hours

Will I receive any results from the tests done as part of this study?
Results that could be important for your clinical care will be shared with you. We will not share other results with you.

What are the risks of this study?

Taking part in a research study involves inconveniences and risks. The main risks of taking part in this study are discussed below.

Risks associated with behavior tests: Some people find taking the behavior tests mildly stressful. To help with this, testing will be conducted in a quiet, private area and you will be offered breaks as needed. The examiners are well-trained in testing children.

Risk associated with PAP sleep study: There are no risks related to the sleep study except for possible minor skin irritation from the patches put on the skin. Sleeping away from home may make you uncomfortable. However, your parent or another family member will sleep in the same room.

Although risks are unlikely, if you are injured, treatment will be available in most cases. If you have insurance, your insurance company may or may not pay for these costs. If you do not have insurance, or if your insurance company refuses to pay, you will need to pay. Funds to compensate you for pain, expenses, lost wages and other damages caused by the injury are not available. This policy does not prevent you from trying to obtain compensation through the legal system.

Are there any benefits to taking part in this study?

You might benefit directly from participation in this study through your improved use of PAP. The knowledge gained from this study may help doctors know more about the experience of living with DS and OSAS and how to support families who are prescribed PAP.

Do you need to give your consent in order to participate?

If you decide to participate in this study, you must sign this form. A copy will be given to you to keep as a record.

What are your responsibilities?
Please consider the study time commitments and responsibilities as a research subject when making your decision about participating in this study

What happens if you decide not to take part in this study?
Participation in this study is voluntary. You do not have to take part in order to receive care at UM.

If you decide not to take part or if you change your mind later there will be no penalties or loss of any benefits to which you are otherwise entitled.

Can you stop your participation in the study early?
You can stop being in the study at any time. You do not have to give a reason.

Can the study doctor take you out of the study early?
The study doctor may take you off of the study if:

- Your condition worsens.
- The study is stopped.
- You cannot meet all the requirements of the study.
- New information suggests taking part in the study may not be in your best interests.

What choices do you have other than this study?
There are options for you other than this study including:

- Not participating in this study.
- You may discuss other options available to you with your doctor.

What about privacy, authorization for use of Personal Health Information (PHI) and confidentiality?

As part of this research, health information about you will be collected. This will include information from medical records, procedures, interviews and tests that are part of this research. Information related to your medical care at UM will go in your medical record. In addition, we will access your medical record to see how many times you go to the doctor or emergency room. Sleep Study results will appear in your medical record with the exception of psychological tests

and parent and teachers questionnaires, which are performed only for this research study. We will do our best to keep your personal information private and confidential. However, we cannot guarantee absolute confidentiality. Your personal information may be disclosed if required by law.

The results of this study may be shown at meetings and published in journals to inform other doctors and health professionals. We will keep your identity private in any publication or presentation.

Several people and organizations may review or receive your identifiable information. They will need this information to conduct the research, to assure the quality of the data, or to analyze the data or samples. These groups include:

- Members of the research team and other authorized staff at UM
- People from agencies and organizations that perform independent accreditation and/or oversight of research; such as the Department of Health and Human Services, Office for Human Research Protections.
- The Data Coordinating Center at Brigham and Women's Hospital at Harvard Medical Center
- The Children's Hospital of Philadelphia
- Mixed Methods Research Lab at the University of Pennsylvania
- Some of the questionnaires are scored by commercial companies involved in developing these types of behavioral tests. The ratings you enter on these questionnaires will be sent electronically to the companies for scoring. The companies will not have information about your child other than your child's age, sex and the date that the questionnaire was sent. You child's birth date will also be sent to the company that scores one of the questionnaires. However, no other personal information that could identify your child will be shared with these companies. Some companies may use summary information from these tests, such as to help develop better tests or scoring procedures.

However, individual information on your child will not be used for any commercial purpose.

- Groups monitoring the safety of this study
- The National Institutes of Health who is sponsoring this research;

By law, UM is required to protect your health information. The research staff will only allow access to your health information to the groups listed above. By signing this document, you are authorizing UM to use and/or release your health information for this research. Some of the organizations listed above may not be required to protect your information under Federal privacy laws. If permitted by law, they may be allowed to share it with others without your permission.

There is no set time for destroying the information that will be collected for this study. Your permission to use and share the information and data from this study will continue until the research study ends and will not expire. Researchers continue to analyze data for many years and it is not possible to know when they will be completely done.

If you are, or have been, a patient at a UM facility, you will have a UM electronic medical record (EMR). We will add research data to your EMR so doctors taking care of you can use this information for your medical care. Your EMR will show that you are in a research study. We will also include a copy of this signed consent form in the EMR to show your doctors that you are in this research.

The data may describe the investigational products you received and anything else that may affect your medical care or place you at greater risk of harm. The intent is to give information to caregivers who provide your medical care while you are on this study.

UM doctors, nurses and other staff will have access to this data. These people are not part of the research team but are involved in providing your medical care, or they perform other tasks related to your medical care. Laws, such as HIPPA, will require them to keep your data confidential.

We suggest that you tell any non-UM doctors that you are in a research study and they can obtain more information if they request it.

The research team may use your information to notify you of appointments, send you appointment reminders, or schedule additional appointments. Include for a clinical trial.

UHealth will grant direct access to your medical records to the sponsor, monitors, auditors, the IRB, and the FDA so they can conduct or oversee the research. By signing this document, you are agreeing to this access. I

Federal law provides more protections for your medical records and related health information. The second part of this consent form, the [University of Miami/Jackson Health Systems] Research Authorization, describes these safeguards.

Certificate of Confidentiality (CoC)

A Certificate of Confidentiality (CoC) covers this research. A CoC helps protect your identifiable information and biological samples.

A CoC protects your private information from all legal proceedings. Unless you consent, information from this research study that identifies you will not be shared outside this research.

- No one can be forced to share your identifiable information or biological samples for a lawsuit.
- Your information can't be used as evidence even if there is a court subpoena.

If you consent, your data **could be shared for other scientific research.**

The CoC does not prevent some disclosures.

- **The researchers can't refuse requests for information from those funding this research. The NIH may need information to assess this project.**
- **You can still share information about yourself. You can also freely discuss your involvement in this research.**
- **The researchers must disclose things required by law. This includes suspected child abuse and neglect, harm to self or others, or communicable diseases.**

Can you change your mind about the use of personal information?

You may change your mind and withdraw your permission to use and disclose your health information at any time. To take back your permission, it is preferred that you inform the investigator in writing.

Dr. Ignacio Tapia
Batchelor Children's Research Institute
Division of Pulmonary Medicine
1580 NW 10th Ave.
Miami, FL 33136

In the letter, state that you changed your mind and do not want any more of your health information collected. The personal information that has been collected already will be used if necessary for the research. No new information will be collected. If you withdraw your permission to use your personal health information, you will be withdrawn from the study.

You will be informed if changes to the study are needed to protect your health. You will be told about any new information that could affect your willingness to stay in the study, such as new risks, benefits or alternative treatments.

Financial Information

While you are in this study, the cost of your usual medical care – procedures, medications and doctor visits – will continue to be billed to you or your insurance.

Will there be any additional costs?
There will be no additional costs to you by taking part in this study.

Will you be paid for taking part in this study?

Yes, compensation details are below:

- Both SC and INT Caregivers will receive $50.00 for each daytime visit (5).
- Both SC and INT Caregivers will receive $50.00 for titration sleep study.

- Both SC and INT Caregivers will receive $10.00 for each Research Coordinator phone call.
- The INT caregivers will receive $10 for Psychologist phone call (7)
- In total, the SC caregivers will receive $380- for participating in the study.
- In total, the INT caregivers will receive $450.
- You will receive $ 25.00 for each daytime visit (5).
- You will receive $50.00 for titration sleep study.
- In total, you will receive $175.00 for participating in the study.

	Standard Care			Behavioral Intervention		
	Caregiver	**Participant**	**Total**	**Caregiver**	**Participant**	**Total**
Titration PSG	$50	$50	**$100**	$50	$50	**$100**
Assessment Visits (Baseline, 1 Mth, 3 Mth, 6 Mth, 12 Mth)	$50/Visit*5 Visits = $250	$25/Visit*5 Visits =$125	**$375**	$50/Visit*5 Visits=$250	$25/Visit*5 Visits =$125	**$375**
Research Coordinator Calls (8 Calls)	$10/call*8 calls =$80	0	**$80**	$10/call*8 calls=$80	0	**$80**
Psychologist Calls	0	0	**0**	$10/call*7 calls=$70	0	**$70**
Total	$380	$175	**$555**	$450	$175	**$625**

Who is funding this research study?
The National Institutes of Health is providing funding for this study.

Conflicts of Interest
There are no conflicts of interest for any party to this research.

What if you have questions about the study?

If you have questions about this study or how your data are going to be used, call the study doctor, Dr. Dr. Tapia at 305-243-9885. You may also talk to your own doctor if you have questions or concerns.

The Institutional Review Board (IRB) at UM has reviewed and approved this study. The IRB looks at research studies like these and makes sure research subjects' rights and welfare are protected.

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 happens if you are injured during the study?

If you are hurt or get sick from something that was done as part of this study, doctors at the clinic or hospital can arrange for emergency medical care. The Hospital does not offer financial compensation or payment for injuries due to participation in this research.

You and your insurance company will be billed for the costs of any care or injuries.

If you think you have been injured from taking part in this study, call Dr. Tapia at 305-243-9885. He can go over things with you, let you know of resources that may be available and give you information on what you need to do.

In case of injury resulting from this study, you will not lose any legal rights by signing this form.

What will be done with my data and when this study is over?

We will use and may share data for future research. They may be shared with researchers/institutions outside of UM. This could include for profit companies. We will not ask for your consent before using or sharing them. We will remove identifiers from your data, which means that nobody who works with them for future research will know who you are. Therefore, you will not receive any results or financial benefit from future research done on your data.

Consent for Use of data for Future Research

As part of the study, we will collect data. We may wish to use and share this information in a future study about PAP adherence. The information will be given a unique code and will not include information that can identify you. Information that can identify you or your data may be kept indefinitely in a database at UM. Only the study doctors and those working with them on this study will be able to see information that can identify you. If you leave the study, you can ask to have the data collected about you removed. You can also ask us to remove information that identifies you from the data.

Please indicate whether you will allow your data to be used for future research by putting your initials next to one of the following choices:

_____ (initials) Data may not be used for future research. They may be used for this study only.

_____ (initials) Data may be used for other future research studies. If the data are shared outside of UM, no identifiable information will be included.

Consent to Take Part in this Research Study and Authorization to Use and Disclose Health Information for the Research

The research study and consent form have been explained to you by:

Person Obtaining Consent	Signature of Person Obtaining Consent
	Date

By signing this form, you are indicating that you have had your questions answered, you agree to take part in this research study and you are legally authorized to consent to your child's participation. You are also authorizing the use of your/your child's health information as discussed above. If you don't agree to the collection, use and sharing of health information, you cannot participate in this study. **NOTE:** *A foster parent is not legally authorized to consent for a foster child's participation.*

Name of Subject (child)	
Name of Subject (parent.legal guardian)	
Name of Authorized Representative	Relation to subject: ☐ Parent ☐ Legal Guardian ☐ Self

Signature of Authorized Representative

Date

NAME: _____

MRN: _____

AGE: _____ DOB: ____/____/_____

ADDENDUM 1: UNIVERSITY OF MIAMI

RESEARCH AUTHORIZATION

What is the purpose of this part of the form?

State and federal privacy laws protect the use and disclosure of your Protected Health Information "PHI". Under these laws, your health care providers generally cannot disclose your health information for the research listed above unless you give your permission. You will use this form to give your permission. By signing this form, you authorize the University of Miami, the Principal Investigator and his/her/their/its collaborators and staff to obtain, use and disclose your health information, as described below. We call these people and institutions "Providers" in this form.

What Protected Health Information will be used or shared?

You are authorizing the use and sharing of all of the information collected or created during this research as described in the first part of this document, including information in your medical records that is relevant to this research study. Information that may be relevant includes:

- Your past medical history,
- Medical information from your primary care physician,
- All other medical information relating to your participation in the study listed at the top of this document; and
- Genetic or genomic data obtained by analyzing the biological samples you provided, if the consent document describes genetic analysis.

Who may receive my Protected Health Information?

The Providers may use and share your health information with:

- The Principal Investigator and his/her research staff

- Representatives of government agencies that have oversight of the study or who the law permits to access the information such as the U.S. Food and Drug Administration, the Department of Health and Human Services, and the Florida Department of Health
- Groups that collaborate and sponsor research (Cooperative Groups)
- Institutional Review Boards (groups of people who oversee research)
- Other persons who watch over the safety, effectiveness, and conduct of research.
- The Sponsor of the research, its agents, monitors, and contractors
- Other participating researchers; and
- Independent data and safety monitoring boards

Authorized staff such as doctors and nurses who are taking care of your but are not involved in this research may be aware that you are participating in a research study and may have access to research information about you. If the study is related to your medical care, we may include the study-related information in your permanent hospital, clinic, or physician's office records.

Why will my Protected Health Information be used and disclosed?

- Researchers (those individuals in charge of the study) and research team members will use your information to conduct the research study described in this informed consent document and other activities related to the research, such as evaluating the safety of the study.
- The research sponsor, its authorized representatives, business partners, clinical research organizations and affiliates will use your information for the purposes described in the first part of this document and for other activities related to the research. These activities include assessing the safety or effectiveness of the drug, device or treatment that we are studying, improving designs of future studies or obtaining approval for new drugs, devices or health care products.
- The University of Miami's clinical trial organizations will use your information to review and support clinical trials at the University.

- Other University of Miami offices involved in regulatory compliance, including the Institutional Review Board (IRB), Offices of General Counsel, and Compliance may use your information to ensure the study teams are performing the research correctly.
- U.S. government agencies, such as the Food and Drug Administration and the Office for Human Research Protections, government agencies from other countries, and others who must use your information to review or oversee this research and to review the data so they can decide whether to approve a new drug, device or other health care product for marketing.

What other information should I know?

1. Once the study team has disclosed your information to a third party, the federal privacy law may no longer protect the information from further disclosure.
2. You do not have to sign this Authorization, but if you do not sign it, you may not participate in the research and receive the research treatment; however, your r decision will not affect your right to other medical care.
3. You may change your mind and revoke (take back) this Authorization at any time and for any reason. To revoke this Authorization, you must write to the study doctor or to the Human Subjects Research Office at Gables One Tower, 1320 S. Dixie Highway, #650, Coral Gables, FL 33146.
4. If you revoke this Authorization, you will not be able to continue taking part in the research.
5. While the research is in progress, you cannot access and read your health information that is created or collected by the institutions and people listed above. After the research is finished, you may see your health information.
6. This Authorization does not have an expiration date. There is no set date at which your information will be destroyed or no longer used because the research will need to analyze the information for many years and it is not possible to know when they will complete the analysis.
7. A study team member will give to you a copy of this authorization after you sign it.

_____ _____

Signature of participant or participant's legal representative Date

_____

Printed name of participant