

**CAB Conference Call
March 25, 2021
12:00 ET
Meeting Minutes**

Participants:

Andrea	Jacobi Medical Center
Anisa	Harvard University
Beatrice	University of Florida Jacksonville
Carol	Bronx-Lebanon Hospital Center
Carrie	University of Colorado, Denver
Claire	Harvard University
Falon	University of Colorado, Denver
Gena	University of Miami
Haleigh	FSTRF
Heida	San Juan Research Hospital
Joel	University of Puerto Rico
Jose	San Juan Research Hospital
Julie H.	University of Alabama, Birmingham
Karim	Westat
Kay	Ann & Robert H. Lurie Children's Hospital of Chicago
Kimbrae	Texas Children's Hospital
Lei	Northwestern University Feinberg School of Medicine
Lesley	Texas Children's Hospital
Liz	Harvard University
Mary Anne	Westat
Michael	University of Florida
Raiko	University of Colorado, Denver
Sharon H.	Harvard University
Sharon N.	University of California San Diego
Shary	University of Southern California
Tatania	Tulane University
Theresa	Baylor College of Medicine
Tracy	Westat
Tzy-Jyun	Harvard University
Veronica	University of California, San Diego
Vinita	Westat

- **APPROVAL OF MINUTES**

The minutes from the February 11, 2021 call were approved with no changes.

- **TERBO Brain Overview and Feedback – TERBO Brain Protocol Team**

Claire introduced **Sharon Nichols, Lei Wang, Kay Malee, and Tzy-Jyun Yao** from the TERBO Brain study. They will be presenting the study to the CAB. **Sharon** started the presentation by saying that the TERBO acronym stands for Trajectories of Emotional Regulation and Behavior Outcomes and Related Brain Regions and Intrinsic Networks. The researchers are very interested in feedback from CAB members. The main goal of the study is to understand how kids and young adults, exposed to HIV or born with HIV, manage their emotions and behaviors.

The study's main questions are:

- Does brain network development differ among people the same age?
- Does the brain network differ with exposure to different ARVs (antiretrovirals)?
- How is brain network development related to different outcomes (mental health, risk behaviors and transition into adulthood)?

Sharon said that the study focuses on how young people do in the course of their life. Some studies suggest that these kids are at higher risk for mental health problems, academic and language challenges. These kids are also more likely to have risky behaviors and they have a hard time learning skills needed for adulthood. The study hopes to help people from having these problems and to understand how to intervene if they are having difficulties. Researchers are hoping to learn about what makes people more vulnerable and what helps them to be resilient.

The study will look at executive function during the adolescence. Executive function is how a person manages their own behavior and emotions. These skills change during adolescence. They are affected by different areas of the brain. These are emotional (fear, happiness, etc.) and the other one is related with control and executive function. In adolescence, the emotional part develops earlier. There should be a balance between the two areas of the brain.

Lei mentioned that the study will look at how maternal exposure to HIV and ART can produce inflammation (maternal and infant). Inflammation can affect child growth and development. Studies have found that the level of inflammation can influence emotion regulation. Emotion regulation is the ability of a person to use good strategies to respond to an emotional situation. **Lei** talked about the different stages of an emotional response. These include stimuli, paying attention, assessing the situation and response. He talked about the areas of the brain that are responsible for control processes and emotional response to situations. The interaction between the different areas of the brain results in a persons' behavior.

Claire asked the researchers how the study can differentiate between mental health issues because of the COVID pandemic and mental health issues developed in early stages of life. **Sharon** answered that in PHACS there have been participant surveys regarding their experience with COVID. The surveys included questions about effects on their emotions and things that helped them during this time, such as time with family. This study will look at young children twice, two years apart. This will help researchers to see changes during that period. **Kay** said that the participant survey did not include questions about suicidal behavior and thoughts. However, the survey included questions about emotions and depression. In the follow-up survey, there are more targeted questions about anxiety and depression. **Kim** said that any survey findings regarding suicidal thoughts would be a very important topic to discuss.

Shary asked how the study can tell between overlapping factors affecting a person. She said that mental health issues, like anxiety, can rise again and be overwhelming because of isolation caused by the COVID pandemic. **Sharon** said that the study will look at stressors people experienced growing up and ones they are experiencing now. It is known that all experiences affect how people react to situations and manage their behavior. It is also important to understand what kind of resources people have to be able to manage different situations. Researchers will use statistics to learn how these factors affect each other. **Sharon** said it is important for CAB and PUG members to share what is important in their personal experience to be evaluated in the study.

Sharon said the researchers expect that people exposed to HIV have differences in their brain networks that affect their emotional regulation. The study will look at MRI scans from the participants to see if this is true.

The aims of the study:

1. Compare brain network development between children exposed to HIV around birth and the findings of the participants of another study;
2. Effects of exposure to ARVs before birth; and
3. Compare long-term brain networks from young adults (exposed to HIV and born with HIV) and the findings of the participants of another study.

Sharon explained the study's two cohorts:

1. 190 children between 10-14 yrs. at entry that are enrolled in SMARTT. Two year follow up. Those children will be compared with the Adolescent Brain Cognitive Development study (ABCD). The ABCD study looked at the factors that may predispose a child to have problems with substance use.
2. 100 young adults 22-29 yrs. participating in the AMP Up study (50 HIV+ and 50 exposed to HIV but uninfected). These young adults will be compared to participants in the Human Connectome Project – Young Adult (HCP-YA) study. The HCP-YA study looked at the brain networks and how the parts of the brain interact with one another.

The TERBO BRAIN study will start at 7 PHACS sites; sites which already have SMARTT and AMP Up studies. Participants will come in for 2 visits. The first visit will have cognitive and behavioral assessments. This will include surveys, questionnaires, and different tasks. The second visit will have the neuroimaging assessment using an MRI scan.

Tatania stressed the importance of medical network support and support groups during adolescence.

Sharon said that there are research studies focusing on the LGBTQ community.

NOTE: The next CAB call will be on Thursday, April 22, 2021 at 12:00 pm ET.