The Canadian Healthy Infant Longitudinal Development Study

THE CHILD STUDY: EDMONTON EDITION

…keeping in touch

April 2014

Our site study Principal Investigator Dr. Mandhane has a few laughs during a clinic visit

We really hope that all of our CHILD families are having a great start to the spring season as we begin to (gradually) see warmer days!

We are continuously working on how best to share the study results and news with you.

Introducing the team:

Dr. Mandhane is a Pediatric pulmonologist and the Edmonton site lead Principal Investigator of study. When he is not attending to his patients, you will likely find him in the office discussing the latest superheroes and villains with our CHILD children.

Joyce Chikuma is the Project Coordinator of the study. Being a mother of teenagers, she misses cuddling with babies. If you plan on bringing a baby to the office, be warned, Joyce will ask to pick them up and hold them tight!

Dianne Semeniuk is our Psych Intern and is in charge of completing the Neurodevelopmental tests with our two, three and five year olds. All the kids that come to the office love Dianne because she secretly holds the key to their hearts: stickers, stickers and more stickers!

Sagal Ghelle is our new Research Assistant to the study. You will often find Sagal taking breaks half-way through the visit to spend time playing with the children and she always finds just the right toy for them to play with!

We would like to congratulate our Research Assistant, Melissa, on giving birth to her baby boy Kaiden (Feb 1st, 2014)!

Important Numbers:

Two Year Visits: This summer we will be finished with 2 year visits, with only **70** more to go!
Three Year Visits: **179** have been completed!
Four Year Visits: There won't be any four year visits, however we'll be sending two behavior questionnaires for the Sleep study through email for you to complete.
Five Year Visits: We have completed **15** of our pilot 5-year visits!

In the News:

Healthy Bacteria in Babies

The CHILD study was featured in the **New York Times**! The *Healthy Bacteria in Babies* article highlighted that the presence of gut microbes serves a very important function during infancy by telling the immune cells not to overreact to certain bacteria but to react to others. When those microbes are not present, the immune system is more likely to overreact to something benign, like food or dust. Our CHILD researcher from the University of Alberta, Dr. Kozyrskyj, states in the article "We think this is a pathway to the development of conditions like allergies and asthma", particularly with the rise in children delivered by Caesarean section. The results were published in the journal of Canadian Medical Association (CMAJ).

Article published in NY:
http://www.nytimes.com/2013/02/26/science/breast-milk-promotes-healthy-gut-bacteria-in-babies-study-says.html?_r=0

The New York Times

Full study published in CMAJ:
http://www.cmaj.ca/content/185/5/385.full.pdf+htm

The CBC's documentary **"The Nature of Things"** with David Suzuki featured the CHILD Study. In this segment, Vancouver site CHILD study co-Principal Investigator, Dr. Stuart Turvey, discusses what's new in allergy research, tune in here to watch:

http://www.cbc.ca/natureofthings/episodes/the-allergy-fix

Recent Award

Dr. Mandhane received $29,000.00 for the study generously donated by Shoppers Drug Mart 2013 Tree of Life!

Highlights from CHILD Study Mini-Symposium:

At the March 2014 symposium Dr. Mandhane, Dr. Kozyrskyj, Dr. Befus and their trainees discussed the latest research from CHILD study here in Edmonton. Banting Postdoctoral Fellow **Dr. Meghan Azad** (University of Alberta) shared findings from her published article in the British Medical Journal (BMJ) "*Probiotic supplementation during pregnancy or infancy for the prevention of asthma and wheeze: systematic review and meta-analysis*". The study investigates the relationship between the use of probiotic supplements during pregnancy or the first year of an infant's life and the development of childhood asthma and wheeze. Having found no evidence of a protective association, the authors conclude that, based on current knowledge, "probiotics cannot be recommended for primary prevention of childhood asthma or wheeze".

Dr. Mandhane presented **SLEEP-E**, which is a sub study of CHILD **unique to Edmonton**. The study focuses on Sleep Disorder Breathing (SDB) which ranges from habitual snoring to obstructive sleep apnea syndrome. The study hypothesis is that children who develop SDB by age 2 are more likely to present with neurobehavioral

deficits than children without SDB. These are the questionnaires that are completed every 3 months asking how, when, where your child sleeps and if you think they have a sleep problem. We administer a neurodevelopment test every year to observe their development.

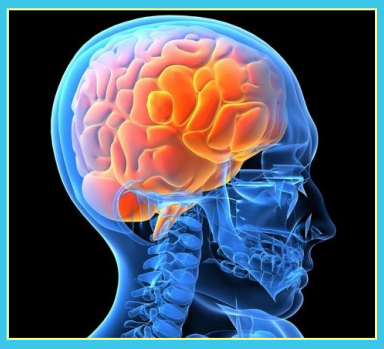
The SLEEP-E Coordinator and PhD candidate **Jennifer Mariasine** is involved in the collection of sleep data using a portable home sleep device (T3) for one year old child participants. Currently, she is working on the scoring and data management of the T3 sleep studies as well as the actigraph studies (a watch-like device used in children age 3 and 5). The goal of this study is to see if a home sleep study can be used to diagnose sleep-disordered breathing and be a viable alternative to an in-hospital sleep study. Her thesis will be also be utilizing data from the CHILD study to determine what factors influence the development of memory in children at age 1. The results derived from this study will be able to inform future practice in the field of early childhood psychology.

Shepard showing off his cool actigraph!

Our M.Sc. graduate student **Amanda Lau** presented her thesis project which examines risk factors that predict sleep disorder breathing in first year of life and what factors effect sleep duration in the first year of life. Some of her preliminary results have shown a positive association between breast feeding and sleep duration (i.e. there is an increase in sleep duration with an increase in breast feeding). Also, in relation to sleep apnea for every cold there is an increased risk of sleep apnea.

Dr. Mandhane also presented on behalf of our Psych Intern **Jennifer Fitzpatrick** whose project is to determine if infant socioemotional development is influenced by maternal stress and depression. There is a key association between maternal depression and child language as a function of socio-emotionality and emotional regulation in children. Jennifer's main goal is to see if this association, specifically maternal depression and infant socioemotional development, exists in a very young population. CHILD has many tools, such as the BAYLEY scales of infant development scale, which she uses to measure socio-emotional development in the 1 year olds and language development at 1 year, as well as CHILD maternal stress questionnaires which are subjective measures that assess maternal relationship status, depression, confidence in parenting, etc.

Neurodevelopmental and Actigraphs Results



Please note that, although we are doing the best we can do, we are going to need some time to process and release the neurodevelopmental and actigraphs results. Your patience with us is appreciated!

The Five Year Visits:

We are all so happy to be meeting with our pilots and seeing how much they have all grown! At the five year visits we are doing spirometry (pulmonary function test) before and after using Ventolin to assess for any potential risk for asthma. We are also completing an allergy/skin prick test and a neurodevelopmental test.

Maha was fantastic in completing her breathing test!

Lovely Amanda and awesome dad John during their 3 year visit!

Allergen NCE:

Here is a summary of some findings made by Allergen/CHILD researchers:

-Owning a dog may protect against the development of allergies if exposure begins in the womb to the first year of life, according to an overview of relevant research presented in the Winter 2014 issue of *Allergic Living* magazine.

-New Canadian guidelines on the introduction of potentially allergenic foods to babies

Delaying the introduction of potential "trigger" foods, such as peanut, fish or egg, beyond six months of age, does not prevent, and may even increase, the risk of developing food allergy, according to new guidelines from Canadian pediatricians and allergists

- Traffic fumes affect asthma in children genetically susceptible to the disease

-Dr. Allan Becker brings the CHILD Study to Manitoba television viewers. Tune in here:

http://www.youtube.com/watch?v=SIHtECA2PFg&feature=youtu.be

Please visit http://www.allergen-nce.ca/ for more updates.

What can you do as a subject?

.. Stay in touch!
Have you had a recent change of mailing address, telephone number or email address? – Please update the local CHILD team at: 780-407-8084 | chikuma@ualberta.ca

Soren and his uber cute Turkey hat during his 2 year visit!

... Questionnaire completion!
Timely completion of the questionnaires is greatly appreciated and the data you provide is very valuable information. We are happy to assist!

Call or email us:
780-407-8084 |
chikuma@ualberta.ca