CHILD STUDY

CHILD COHORT STUDY

NEWSLETTER
WINTER 2024

Dear CHILD Cohort Study kids, parents & families:

Welcome

to the latest edition of the CHILD Study Newsletter

We hope you are well! As we approach year's end, we are excited to share some updates —including news about recent and upcoming initiatives to enhance community engagement and improve our research practices.

We would love to get your feedback and your ideas for the Study's future. Please reach out to us at: child@mcmaster.ca

As always, your involvement remans critical to CHILD. Together, we are shaping a brighter future for children and families across Canada. Thank you for being an essential part of this journey!

Padmaja (PJ) Subbarao
MD, M.Sc.
CHILD Director

Giving blood in Winnipeg

Miles from Edmonton in Peru with an alpaca pal

Kenzie doing a spirometry test in Manitoba

Giveaway prize winner Levi in BC

Nicole in Toronto

Cassanda (Toronto) with her Giveaway iPad

Matteo and dad wearing CHILD swag

IN THE SPOTLIGHT

Meet the people behind the Study

What do you like about being part of the CHILD study?

Connecting with kids across the country.

What is your favourite book or movie, and what makes it so special to you?

"Before the Coffee Gets Cold." It gives you a new perspective on time and how you spend yours.

What is your favourite way to spend a weekend?

Relaxing at home with my family and pets.

If you could change one thing about the world to make it better, what would it be and why?

If I could change one thing about the world, it would be peace and poverty. A lot of poverty comes from war so creating world peace would help end poverty.

What you think is the biggest challenge for people your age today?

The fact that everyone thinks we're the ones who mess everything up and our mental health awareness makes us weak.

What's a fun fact about you that not many people know?

That I can remember a bunch of random facts and words at any given moment or that I graduated with highest average in grade 8 and won the female sports award.

Brynn on stage at a 2019 CHILD research conference

Brynn with her CHILD art in 2019 (above) and 2021 (below)

Powered by poop

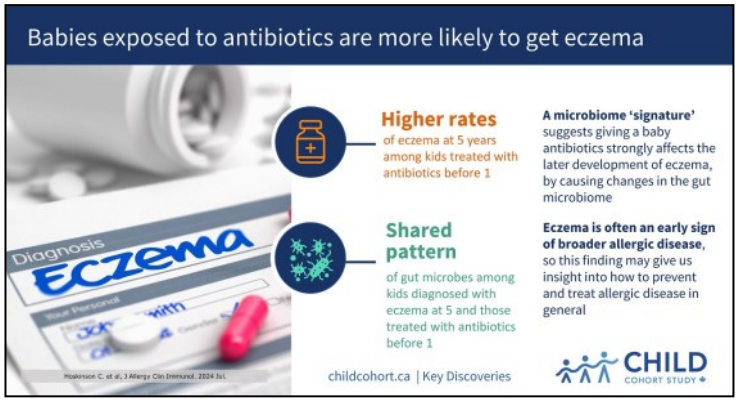
We know providing us with stool samples is not your favorite activity

However, many important CHILD discoveries have come from studying these samples.

Your poop has made CHILD a world leader in understanding the gut microbiome—the bacteria in our digestive tract—and its role in our health.

Recent findings powered by your poop include:

Giving a baby antibiotics affects its risk of developing eczema by changing the gut microbiome. Eczema is often the starting point for other allergic disorders, so this finding may help identify ways to prevent allergies.



See the Key Discovery about this research (click on the image).

If an infant's gut microbiome matures slowly, this can lead to a higher risk of allergies. This finding may enable better prediction and prevention of allergic disease.

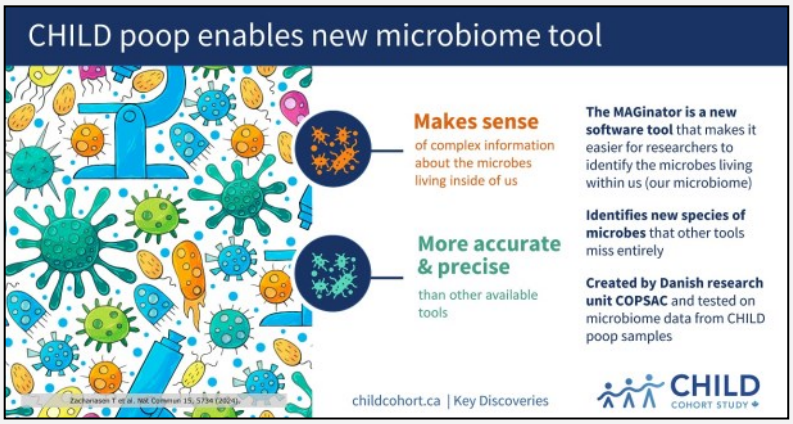
The microbes living in a mother's breast milk affect her child's gut and risk of developing asthma or allergies. This finding may enable new therapies to maximize the health benefits of breastfeeding.

Breastfeeding shapes an infant's microbiome and later lung health, including their risk of developing asthma. This shows us again that promoting breastfeeding is a public health priority.

Smoking while pregnant can change a baby's microbiome, increasing the child's risk of becoming overweight or obese. This finding may help promote healthy weight in children by informing the development of probiotics.

See all CHILD Key Discoveries about the microbiome

RESEARCH UPDATES from CHILD COHORT STUDY

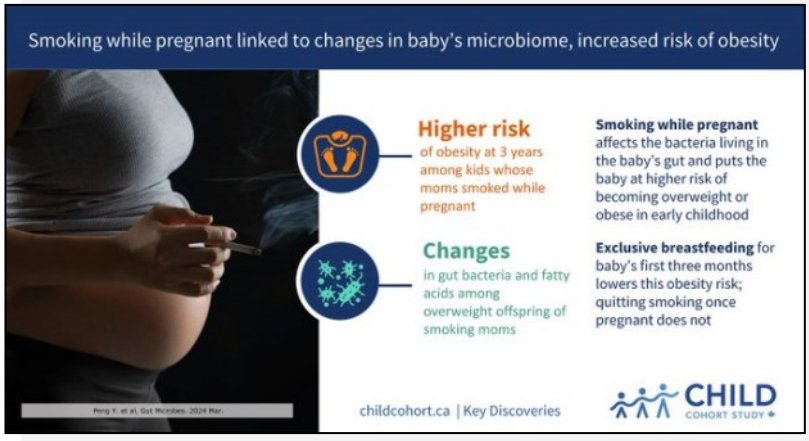


See the Key Discovery about this research (click on the image).

CHILD poop enables a new tool for studying the microbiome

A recent study led by researchers from the Danish birth cohort COPSAC and using data from CHILD stool samples has resulted in the creation of a new tool for studying the microbiome.

This free online tool will make it easier for researchers to identify how the microbes living within us keep us healthy or make us sick. This, in turn, will contribute to new ways of preventing and treating disease.



See the Key Discovery about this research (click on the image).

Send us your poop: If you have not yet given us a stool sample at your current age, even if you completed your 12-13 year visit, please do it now! Contact your site coordinator (see page 10) to arrange for sample collection. Thank you!

WHAT ELSE HAVE WE LEARNED LATELY?

Read more about how air pollution affects a baby's genes

Read more about how mom's genes affect her breastmilk sugars

Let's take a look at those genes...

Recent CHILD research has been looking more closely at what's going on at the level of our genes.

One recent study showed that if a baby is exposed to air pollution when still in their moms' belly, they may experience gene-level changes that increase their risk of developing allergies and asthma. This finding was reported in *The Toronto Star*.

New first-of-its-kind research from CHILD also shed light on the relationships among a mother's genes, health-boosting sugars in her breastmilk, and her baby's lung health. This multi-year study connected breastmilk researchers at the University of California San Diego and the University of Manitoba with bioinformatics and genetic analysis experts at Queen's University.

The study's findings could inform new ways of predicting and preventing childhood disease, and could lead to new treatments to prevent respiratory illness.

Getting attention

CHILD discovery featured in science magazine

CHILD research about how four major childhood allergies all stem from specific microbes in our gut has been featured in a story in the US popular science magazine *Scientific American*.

The research was published in 2023. It identified gut bacteria and other early-life influences linked to children developing allergies by age five. The researchers noted then that the findings could lead to ways of predicting and preventing allergies.

The March 2024 story in *Scientific American* notes that steps are already underway to develop a probiotic treatment based on this finding:

"Multiple clinical trials are underway to test allergy treatments with 'cocktails' of selected bacteria."

Read the story in Scientific American (click on the image)

Scientific American has featured contributions by over 150 Nobel Prize-winners and such scientists as Albert Einstein since its creation in 1845. It is the oldest continuously published magazine in the US.

This same CHILD research was also selected by the major scientific journal *Nature Communications* as one of its Top 25 Health Sciences Articles of 2023.

IN THE SPOTLIGHT

Meet the people behind the Study

Aaron

CHILD Parent

Why did you enroll your child in this study?

I was involved in another longitudinal cohort study in Vancouver and when we were approached by CHILD it was an easy decision. I understand the importance of this type of research and the results that come from being part of a larger cohort group. Also the broader questions being asked by CHILD were interesting to my wife Kat and me.

What's a hobby or activity you're passionate about?

I love cooking and learning new techniques to use in preparing food for our family. Over the past couple of years I've learned to use a *sous-vide* machine and an upright drum smoker!

If you had a time machine, which period would you visit and why?

Egypt, at the time of the building of the Great Pyramids. They have always intrigued me as monuments and the questions surrounding their construction have been an ongoing curiosity.

If you could learn any new skill instantly, what would it be?

Playing the piano. I took lessons when I was younger, but could never get my fingers to go where they needed to make the music that I wanted to play.

What's your favourite way to unwind?

Walking our dog, Dandelion, after dinner. It's nice to get outside and get some fresh air every day.

What is something about you that not many people know?

I have seen my favourite band, The Tragically Hip, over 20 times. Kat and I were even in one of their music videos!

HOW ENGAGING!

We want you

to be included, engaged and appreciated

We've been ramping up our efforts to ensure that you, the families in CHILD, feel appreciated and fully included.

We are also creating more opportunities especially for CHILD youth to build community and get to know one another.

For example, this year:

Virtual Spring Camp

In March 2024, youth across all sites attended a "Virtual Spring Camp" where they interacted with study leaders and did team-building activities including a virtual Escape Room.

CHILD Youth Advisory Council

Recruitment began for a Youth Advisory Council, being created to allow youth participants to contribute to Study planning and knowledge mobilization, interact with Study staff and researchers, and organize activities.

Strategic Planning Workshop

A 2024 Planning Workshop involved families from the Study's National Participant Engagement Committee in activities focused on enhancing equity, diversity and inclusion within CHILD, and on co-designing the research protocol for 16-year data collection.

CHILD families with Study Director PJ Subbarao at the workshop

Winter Giveaway

To express our gratitude to families in CHILD, we hosted our first-ever Winter Giveaway Contest in early 2024. We awarded eight prizes at each study site—five for youth and three for parents—along with one grand prize at the national level.

Learn more and meet the Giveaway winners (click on the image)

Prizes were awarded for the completion of 13-year-visit requirements, and included a 10th generation iPad ($600 value), electric scooters ($500 value), Beats wireless headphones ($400 value)—among others.

While not every family won a prize, we sincerely appreciate every family's ongoing commitment to the Study. And we're planning more ways to show our gratitude to you in the future!

Coming up...

Moving forward, CHILD is committed to fostering even more active, collaborative engagement with research participants.

The Youth Council and the Knowledge Mobilization Stakeholder Advisory Committee will help co-design knowledge products like infographics, videos, and policy briefs.

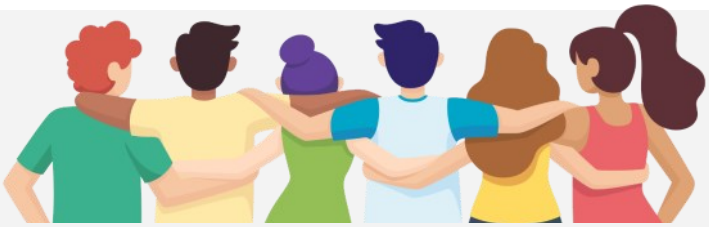
The Youth Council will also help organize events like Youth Conferences, where youth can present their ideas and share experiences.

Town Hall meetings will update families on research findings, address questions, and gather valuable feedback.

Stay tuned for more updates on our exciting plans!

WORKING TOGETHER

Some of the folks at the workshop. Click on the image for more info and photos



Join the CHILD Youth Advisory Council!

We're excited to announce that the first CHILD Youth Advisory Council meeting will be held in early Spring 2025! Your unique voice and perspective are essential in shaping our research, and we want to hear from you.

We're looking for passionate and diverse youth from the CHILD Study to join us in this important work.

As a member of the Youth Advisory Council, you'll get to:

- Share Your Ideas
- Be Part of the Research Process
- Connect with Other Youth in the Study
- Plan Events for Youth
- Develop Your Skills
- Make a Real Impact

If you're interested in joining and haven't told us yet, stay tuned for an email from us or contact us at child@mcmaster.ca

Let's make a difference together.

CHILD families & researchers plan the Study's future

At CHILD's 2024 strategic planning workshop

In July 2024, we hosted a strategic planning workshop with our researchers, staff, invited experts, and families from the Study's National Participant Engagement Committee.

This workshop focused on enhancing equity, diversity, and inclusion within CHILD, as well as co-designing the research protocol for the 16-year data collection process, including assessments, questionnaires and samples. The event also sparked new engagement ideas that we'll be rolling out soon.

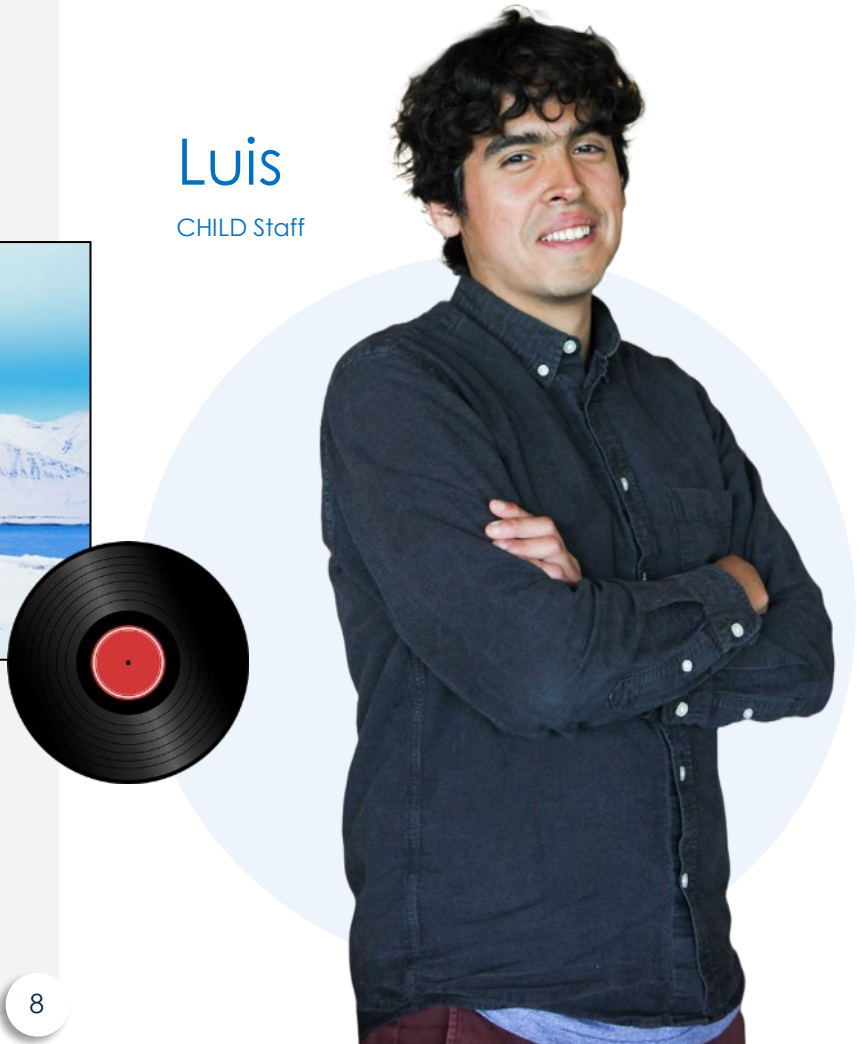
We are currently in the process of developing the plan for the 16-year visits and would love to hear your thoughts. If there's anything you'd like us to include or consider, please email us at child@mcmaster.ca

IN THE SPOTLIGHT

Meet the people behind the Study

Luis

CHILD Staff



What's your role on the study team?

I manage and prepare CHILD data for researchers around the world, ensuring it meets high-quality standards while safeguarding participant privacy. I also design and optimize statistical programming workflows, track key performance indicators, and provide statistical guidance and meaningful visualizations to support Study progress.

What do you enjoy most about your job?

I'm passionate about using coding and visualizations to solve problems and bring ideas to life, turning data into something valuable that helps guide decisions and create change. I also enjoy contributing to improving and understanding children's health by facilitating collaborative research as part of the CHILD team.

If you could travel anywhere in the world, where would you go?

Northern Canada! I am fascinated by the vastness of the breathtaking Arctic landscapes with its incredible wildlife and pristine lakes.

Artist's visualization

What hobbies or activities do you enjoy outside of work?

I am into cycling, listening to music, and birdwatching! I really like music on vinyl, and I have a growing collection of records that spans all decades.

What is your favourite way to unwind?

I like exploring neighbourhoods around the city and trying out interesting restaurants. I also like getting lost inside record stores and thrift shops!

What is something about you that not many people know?

I love coming up with feasts for my friends and turning it into an adventure by exploring the city to find the best possible ingredients. It feels like a treasure hunt, and the best part is seeing everyone enjoy the meal together at the end.

New faces at CHILD headquarters

In 2024, some new talent joined the national headquarters of CHILD—the National Coordinating Centre (NCC) based at McMaster University in Hamilton, ON.

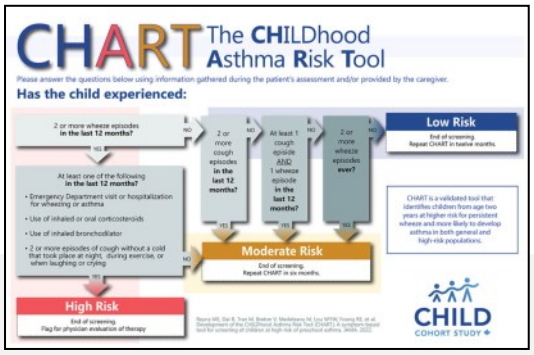
Leah Graystone
Data Analyst

Anitha Ithayalingam
Program Manager, Knowledge Mobilization & Patient Engagement

Hey everyone!
I'll be leading activities to get youth and parents more involved in the CHILD Study. I'm excited to meet you and work together!

Salma Jurewa
Research Assistant

Making a difference: Hannah's Story



From the time Hannah was a baby, her parents had to take her repeatedly to the hospital due to breathing problems. There, she was often diagnosed with lung infections and given antibiotics. But the problem kept recurring and its root cause was never identified—until Hannah was referred to CHILD Director Dr. PJ Subbarao.

"Once we saw Dr. PJ, it has been a blessing from there," says Hannah's mother Melanie in a SickKids podcast about Dr. Subbarao's work.

The life-changing influence Dr. Subbarao had in Hannah's life was her ability to diagnose Hannah as suffering from asthma, and from there to help with treatment.

Central to Hannah's diagnosis was a simple tool based on CHILD research: the CHILDhood Asthma Risk Tool, or CHART.

"The outcome was just amazing. Hannah's asthma has improved drastically… we're not in the ER anymore," says Hannah's mom: "It's a good news story."

Listen to the podcast for the details of this CHILD success story!

CHILD 12-13 YEAR VISITS

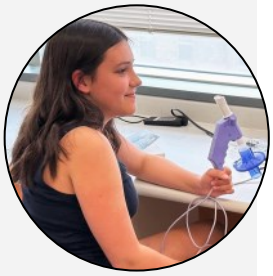
It's not too late!

If you're over 11 years 9 months and haven't visited us yet, we still want to see you for your 12-13 year visit!

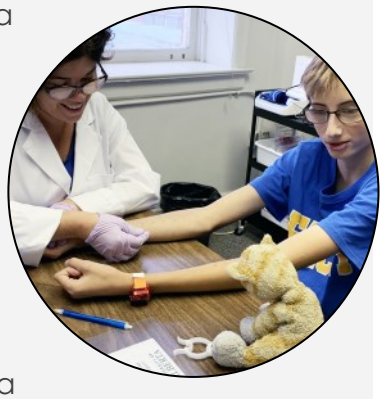
Please:

- contact your site coordinator for visit details and to book your appointment
- bring your biological samples with you
- do your best to complete your questionnaires before your visit
- when possible, let us know 48 or even 24 hours ahead if you have to reschedule.

Vancouver site
Erika Sifuentes
604-875-2000 x 6390
childstudy@bcchr.ca



Edmonton site
Joyce Chikuma
825-993-2453
chikuma@ualberta.ca



Manitoba site
Scarlet Deluz
204-789-3677
CHILD@chrim.ca

Toronto site
Eshwari Nanjappan
416-813-7765
child.study@sickkids.ca

Thanks to the around 1500 families who have already completed their 12-13 year visits. It was great to see you all!

Now we only need to see the rest of you before the end of 2025 . We're happy to do whatever we can to make it easy for you: evening or weekend visits, virtual visits...

If you can't make it for your 12-13 year visit, please drop us a line to keep in touch and let us know we have the right contact information for you: child@mcmaster.ca

> "Longitudinal data—data from across the years—from cohorts like ours play an **invaluable** role in advancing our understanding of the determinants of illness and health.
>
> The longer we follow CHILD families, the more **powerful** the data become and the more **impactful** the research findings they enable."
>
> *—CHILD Director Dr. PJ Subbarao*

Questions?

If you – as a CHILD family youth or parent – have anything more you'd like to know about the Study, its researchers or the science involved, please send us your questions.

We will take your questions to CHILD researchers and include their answers in future newsletters.

Ask away!

child@mcmaster.ca
Subject line: "Ask CHILD"

Nicholas chilling at his CHILD visit in Manitoba