

THE BIG LITTLE NEWSLETTER FOR THE STUDY ON THE PREVENTION OF CARDIOVASCULAR DISEASE AND TYPE 2 DIABETES IN CHILDREN AND ADOLESCENTS



In this issue

- **The 3rd Visit, Completed**
- **Plan for the 4th Visit**
- **Communications: Going Electronic**
- **Raffle: Here are the Winners**
- **Social Network**

The 3rd Visit, Completed

The whole QUALITY team wishes to express its gratitude towards you for having partaken in the 3rd visit, which included undergoing tests at the hospital, wearing accelerometers at home, and answering surveys over the phone on your eating habits.

It is thanks to you that this research could be undertaken, and your involvement will allow researchers to test their hypotheses on heart disease, diabetes, and obesity prevention among children and teens over an extended period of time.

The participants come from many different regions in the Belle Province, namely Québec City, the Townships, the Laurentians, Lanaudière, the Montérégie, Laval, and Montreal. In all, **377** youths from the QUALITY cohort made the 3rd visit. Of these, **106** also participated to the blood pressure sub-study introduced in May 2015 (those who were not asked to partake in this sub-study but were eligible will be contacted soon).

Following the end of this important step in our study, others begin. The cleansing of the data needs to be performed, analyses must be carried out to test hypotheses, results must be compiled, and scientific papers will be written and published in specialized journals, then vulgarized so as to transmit the pertinent information to the general public through different communication strategies.

Plan for the 4th Visit

Parallel to these analytical efforts, the QUALITY team is planning a fourth visit to re-evaluate the cohort. A first application for funding will be sent in September 2016 to the Canadian Institutes of Health Research (CIHR). We hope to obtain funding in the two following years, so as to setup this visit. That would mean roughly five years would have gone by since the 3rd one; the participants by then would have become young adults. Indeed we expect to redo the same tests with the same participants at an adult age. That is right, although Sainte-Justine UHC is a pediatric hospital, the specific context of this research allows us to investigate into adults, which would mean carrying out a longitudinal comparison of the data from ages 8-10 (1st visit) through to ages 20-22 (4th visit).

We hope to conduct a 4th visit for the QUALITY study in order to re-evaluate the participants as adults!

Communications: Going Electronic

As always, we will continue to be in touch with you through our newsletter, to keep you aware of our progress. We will tell you of relevant publications and of developments concerning our funding.

But our next issue of *The Big Little Newsletter for the Study on the Prevention of Cardiovascular Disease and Type 2 Diabetes in Children and Adolescents* will be sent both in paper and web formats (through regular mail and email). Should you not receive our email then, please contact us so that we can update your information. In time, the *The Big Little Newsletter* will only be produced in electronic format.

As for the 4th visit, you will be contacted by phone early enough for you to plan ahead. Do not worry: each participant of the QUALITY cohort will be contacted.

If you have any question you can reach us here: famille@recherche-ste-justine.gc.ca

Raffle: Here are the Winners

We had announced that every youth having completed the 3rd visit would be automatically entered into a raffle, to thank you all for your generous participation. The names of the winners were drawn on May 16, 2016.

Winners!

The draw revealed two lucky winners: **Jasmin** from Bromont, and **Charles** of Montreal. They came to pick up their gift sets, each containing 1 *IPOD* and 1 *Ultimate Ears* portable speaker!

Social Network



Tracie Barnett has been part of the QUALITY study team from the start. She is a researcher at the Sainte-Justine UHC Research Center and professor at the Department of Epidemiology, of INRS-Institut Armand-Frappier Research Center. She has a flourishing research career, and we caught up with her to ask about her brilliant project focused on the social network.

The research project you are presently developing concerns “the social network”. When one thinks of these words many different things come to mind. Can you explain what you mean by this? The importance of social relationships on various aspects of health is well documented. This specific part of the study aims to achieve better understanding of the ties between close friends, in other words youths with whom one spends time and can discuss important issues. Studying the configuration and evolution of such ties will help us appreciate more completely the health choices our youths make, especially in light of their everyday habits.

Social Network, continued...

Your focus is set on the social network of today's youths. Would you say that the specifics of the interactions between youths in 2016 are well documented? Have different sets of social network structures been established? The methodology to study social networks is well established, but the nature of these networks in fact remains almost entirely unknown, as do the ways in which they can evolve throughout adolescence. Yet we know that it is a critical period of life during which are formed friendships that will in some cases last a lifetime. It is thus a pivotal moment, and to provide detailed insight into its networks will mean a lot. Such insight includes probing the configuration of the network of friends as well as their everyday habits. We also know that we all tend to behave similarly to our friends: if we are physically active, chances are most of our friends are too. What we do not know, though, is if it is a question of influence or of selection. In other words, are we the ones choosing friends that are like us, or is it rather that we change our behaviour to fit in better with them? This study will contribute to determine in what conditions (who, where, and when) our network favours a healthy lifestyle.

How different are the means used nowadays by youths to communicate from the ones past generations used? Though the role of friends is the same, it is clear that the means by which friends interact together have changed a lot! In 2016 friends exchange through texting, Facebook, Instagram, etc. We do not know if these interactions strengthen face to face relationships or weaken them, or even replace them. We do not know either whether using these technologies deters or favours healthy habits, and physical activity.

One of your specialties is the epidemiology of obesity in youths. You suggest that the different exchanges and relationships that come with friendship may influence youth behaviour and indirectly have an effect on body composition (proportion of muscle to fat in the body). Which behaviours in youths are you looking into? We focus especially on physical activity, sedentary activities, and eating habits. The configuration of relationships may indeed direct or even dictate our choices. Do all our friends know each other? Or is it that usually friendships are isolated and independent from one another? (We may represent this dilemma with images: a spider web model, and an asterisk one.) And what if a network was composed of "crews", or "gangs", isolated from one another? Would these gangs have distinct lifestyles? Are our choices influenced by interactions with certain groups? These are some of the questions that we look into.

Other than the level of importance two people give to their friendship, what other aspects of the social network may affect behaviour? The aforementioned configuration of the network (isolated friendships, gangs, etc.) is not the only parameter we examine; we also analyse the size of the network (i.e. the number of close friends), its density (the amount of ties between our friends), its frequency, its specific modes of interaction, its lifestyle, and its proximity. Analyzing social networks allows us to generate indicators to help assess a social network's global configuration and to describe the individual friendship ties that compose it.

For this study, the participants of the QUALITY cohort will be summoned again to answer questions concerning the friends they spend time with and who are important to them. The frequency of contacts with these friends (once a day, once a month, etc.), and the means by which they contact each other (in person, text messaging, etc.) are examples of topics that will be discussed in order to describe their social network's composition. What is more, each participant and their best friend will be entitled to get an evaluation of their levels of physical and sedentary activities. How will you proceed? Some youths have already filled out surveys (during the pilot phase of the study). Because we now intend to measure the social network 3 times in the next 3 years we are currently preparing an online questionnaire to make collecting the data easier. The youths will receive a personalized invitation and a research assistant will monitor an online chat room to answer any question

Social Network, continued...

regarding the process. The youths will also be asked to wear a small device (Sensedoc) that measures commuting, physical activity, and sedentary time. On top of this, the device is equipped with a sociometric tag capable of recognizing predetermined places and individuals. We have become technophiliacs! Another novelty is the inclusion of the best friend in the study. If she or he accepts, she or he will also be invited to wear the sociometric tag, thus providing us with information that will help us to validate the data collected in the questionnaires.

Another idea you are investigating is the effect that interactions between friends might have on environmental factors (family type, neighbourhood) known to affect active or sedentary behaviours. Will the Sensedoc device also help this? Yes, the GPS in the device will allow us to document the place where an interaction occurs so as to describe the site better.

All in all, your study will shed light unto certain aspects of the social context of today's youths. Do you believe that these results might concretely influence the way in which health professionals intervene towards youths in their attempts to prevent obesity and the conditions that are associated to it? This research will help us to determine which targets in the social networks of youths should be focused on in order to favour the incorporation of new habits, to sustain changes, or to increase the effects of change. Our analysis will tell us how to identify and generate leverage and key factors capable of best promoting a healthy lifestyle.

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Our partners and funding agencies



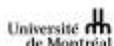
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