

# PEDIATRIC PRESSE

## RESEARCH NEWS

TAKE-IT is a randomized controlled trial of a multicomponent intervention to improve immunosuppressive medication adherence in adolescent kidney transplant recipients. The study started in 2011 and will be wrapping up in spring 2016. The study is being conducted at 8 sites across Canada and the United States, including: the Montreal Children's Hospital (Montreal: PI- B. Foster, co-I L. Bell, B. Knauper, C. Holly), CHU Ste-Justine (Montreal, site PI- V. Phan), Sick Kids (Toronto, site PI - D. Hebert), B.C. Children's Hospital (Vancouver, site PI- D. Matsell), Children's Hospital of Philadelphia (co-PI- S. Furth, co-I N. Zelikovsky), Cincinnati Children's Hospital Medical Center (site PI and lead psychologist- A. Pai), Seattle Children's Hospital (site PI- J. Smith), and St. Louis Children's Hospital (site PI- V. Dharnidharka).



All participants of TAKE-IT received a multidose electronic pillbox in which to store their medications. The pillbox records the date and time each compartment of the pillbox is opened; this is done wirelessly, and



Beth  
Foster  
TAKE-IT  
PI

the data are recorded on a secure website. Patient randomized to the intervention arm were also able to set up the pillbox to provide text message dose reminders if they did not take their dose on time. The TAKE-IT intervention was delivered by a trained 'coach', who met with participants at 3-month intervals. The coach first

helped the patient identify their personal barriers to medication adherence, and then guided the patient in problem-solving to identify strategies to address their most important barrier. Patients were required to produce an 'action plan' that took the form of an 'if... then' or 'when... then' statement. Action plans were reviewed at each visit and modified or changed as needed. Coaches also fed back the adherence data collected using the e-pillbox to the patients at each visit. Patients also received some education about adherence. Participants assigned to the control group used the e-pillbox, but could not get dose reminders. They met with the coach at 3-month intervals, but did not discuss adherence.

The study has gone very well, thanks in large part to the efforts of Diane Laforte, the Project Manager, and to all the dedicated study coaches. We managed to recruit 170 patients, and expect to have 156 patients complete the study. Our goal was to have at least 150 complete. The last patient will exit the study in early May. Then final analyses will begin. A great deal of work has already gone into filtering and summarizing the adherence data.

Preliminary analyses of data from the 3-month run-in period (no intervention applied) have already returned some interesting results. For example, we are seeing better adherence in girls versus boys and poorer adherence in those who report more barriers to adherence. Post-doctoral fellow, Julie Boucquemont, who has come to McGill from Bordeaux, France, has identified 4 distinct adherence trajectories during the run-in period. She will present her findings at the ATC in Boston in June.

Does the intervention work to improve adherence?

... Stay tuned! We hope to have results by Fall 2016.

## ISSUE 4: SPRING 2016

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### UPCOMING EVENTS

**Women in Transplantation  
Developing Leaders Workshop,  
The Transplantation Society,  
Boston, MA**

June 11, 2016

View the website [here](#).

**American Transplant Congress  
Boston, MA**

June 11-15, 2016

View the website [here](#).

**International Congress of  
Pediatrics**

Vancouver, BC

August 17-22, 2016

View the website [here](#).

**International Congress of The  
Transplantation Society**

Hong Kong, China

August 18-23, 2016

View their website [here](#).

**CST Annual Scientific Meeting  
Québec City, QC**

October 13-16, 2016

View the website [here](#).

**CST Pediatric Group Symposium  
and Business Meeting**

Save the date:

[October 13, 2016](#)

**International Pediatric Transplant  
Association 2017 Congress—**

Barcelona, Spain

May 27-30, 2017

Sign up to receive more details  
[here](#).

## TAKE-IT TOO: Teen Adherence in KidnEy transplant Improving Tracking To Optimize Outcomes

In June 2015, the NIH put out another request for applications for adherence studies in adolescents with kidney or urologic disease. Part of the TAKE-IT team used some of the most important lessons from TAKE-IT to develop a new study called TAKE-IT TOO: **T**een **A**dherence in **K**idn**E**y transplant, **I**mproving **T**racking **T**o **O**ptimize **O**utcomes. If successful, this study will invite young kidney transplant recipients, their parents, and their doctors and nurses to share their ideas on how to improve medication adherence, and enlist the help of patients in designing a better electronic pillbox. This study is very exciting for several reasons. First, we have engaged patients and parents in the design of the study and will convene a Stakeholder Advisory Committee at regular intervals throughout the study to provide feedback and guide the next step. The study is planned in 3 stages. The first stage involves separate focus groups of patient, parents, and healthcare providers. The goal of the focus groups will be to get input on what parts of the TAKE-IT intervention they feel are most valuable and to get input on how to integrate an adherence intervention into clinical care. IN the second stage, we will work with Vaica Medical, a company that produces electronic pillboxes, to design a medication monitoring system specifically for young people. Small numbers of patients will meet individually with a study facilitator to examine, and test increasingly functional prototypes of monitoring systems. With the input of the Stakeholder Advisory, we will then design an intervention modified for use in clinical practice. In the third stage, will run a pilot cluster randomized trial at sites across Canada and the U.S. wherein some sites will be randomized to intervention and others to control.

Diane  
Laforte

TAKE-IT  
Project  
Manager



The study sites and investigators for TAKE-IT TOO are: the Montreal Children's Hospital (Montreal: PI- B. Foster, co-I , B. Knauper, K. Vigneault, A. Grenier, A. Descoteaux, X. Zhang), CHU Ste-Justine (Montreal, site PI- V. Phan), Sick Kids (Toronto, site PI- D. Hebert), B.C. Children's Hospital (Vancouver, site PI- T. Blydt-Hansen), University of Pittsburgh (co-PI- A. DiVito Dabbs, co-I M-A. Dew, A. Humar, C. Nguyen), Seattle Children's Hospital (site PI- J. Smith), and St. Louis Children's Hospital (site PI- V. Dharnidharka).

We are optimistic about our chances of being funded but will have to wait until mid-May to know for sure.

## Pediatric Transplant Ethics Book

## LITERATURE FEATURE



CST Pediatric Group member Aviva Goldberg, along with Rebecca Greenberg and David Rodriguez Arias, have co-edited a book being published by Springer to be released May 12, 2016 titled "**Ethical Issues in Pediatric Organ Transplantation.**" Dr. Greenberg is an ethicist at SickKids in Toronto, Dr. Goldberg is a pediatric nephrologist and ethicist in Winnipeg, and Dr. Rodriguez Arias is a bioethicist with the Institute of Philosophy of the Spanish National Research Council in Madrid. The chapters are authored by many of the most prominent physicians, ethicists and academics working in pediatric transplantation today, and the book is the first to examine transplant ethics specifically from a pediatric perspective. Topics covered include managing misattributed paternity discovered during transplant evaluation, an ethical approach to children as potential living donors, the issue of transplant tourism as it relates to pediatrics, and ethical issues in adolescent transplant recipients, among many others. This book will be of interest to practicing transplant professionals, ethicists, policy makers, students and anyone concerned about the ethics of transplantation. Available for pre-ordering online now.

## AWARD & BURSARY INFO

## Trainee Award and Allied Health Bursary Application Information for CST October 2016

The Pediatric CST Group will once again be awarding the two top ranked trainee abstracts in either clinical or basic science categories. Eligible candidates are trainees in the field of pediatric transplantation, at the undergraduate, graduate or post-graduate levels. Medical students, medical and surgical residents and fellows, basic scientists in training, and allied health trainees are encouraged to apply.

The Pediatric CST Group will also be offering up to five Paediatric Group Associate Member Bursary is to help facilitate the attendance of Allied Health Professionals at the Annual CST Paediatric Special Interest Group Annual Dinner and Business Meeting. The Pediatric CST group continues to encourage the active input of all members across the broad range of individuals with a professional interest in transplantation in clinical practice, research and education.

**Please see the [CST website](#) for full details and eligibility. The deadline for both applications is May 31, 2016.**

The University of Alberta/Stollery Children's Hospital heart transplant group continues to explore the immature immune system of early childhood and its impact on transplant outcomes. Children receiving heart transplants in the first 1-2 years of life show much better long term acceptance of the grafts while often receiving less immune suppression. The work group of Dr. West and Dr. Urschel perform immune phenotyping and functional analysis of the immune system in various age stages and recently within the POSITIVE study/CNTRP project 6 for patients with all types of solid organ transplants and from all over Canada. Recent publications analyze the role of B-cell memory ([Urschel et al. J Heart Lung Transplant 2016](#)) and the impact of thymectomy during cardiac surgery and ATG induction on the development of the immune system in transplanted and healthy children ([Dijke et al. Am J Transplant 2016](#)). Another focus is on new and improved ways to detect blood group directed antibodies and B-cells ([Jeyakanthan et al. am J. Transplant Oct 2015](#) and [Nov 2015](#) and [Slaney et al. Conjug. Biochemistry 2016](#)).



Collaborative projects with the infectious disease departments and pathology explore specific immune response to CMV and EBV and PTLD development. A collaborative initiative with the Complex Pediatric Therapies Follow up Program of Western Canada has recently completed studies on neurocognitive outcomes and quality of life in Kindergarten children after infant heart transplantation which will be presented at this year's ISHLT conference in Washington.

**"...continues to explore the immature immune system of early childhood and its impact on transplant outcomes."**



Seema Mital with  
Guest Speaker  
Brendan Keating



Chia Wei Teoh Receiving  
the Trainee Abstract Award



Aviva Goldberg with Chia Wei Teoh and  
Diane Hébert

## CST PEDS GROUP AGM 2015

Guest speaker Dr. Brendan Keating, from the University of Pennsylvania, gave a presentation entitled "Discovering Genomic Underpinnings of Rejection and Complications in Transplantation".

Dr. Chia Wei Teoh, University of Toronto, was presented with the Trainee Abstract Award for his research abstract entitled: Mycophenolic acid levels are not associated with clinical adverse events at 3 months post-renal transplantation.

Dr. Diane Hébert, University of Toronto, was recognized and applauded for receiving the CST Clinician Recognition Award for exemplary commitment to the CST mission through excellence in front-line clinical program development, humanitarianism and education.

Updates on research initiatives and new collaborative projects were presented by: Samantha Anthony (Take Charge Transplant website), Tom Blydt-Hansen (PROBE), Seema Mital (POSTIVE), and Beth Foster (TAKE IT). As well, Aviva Goldberg discussed the new Pediatric DCD Guidelines initiative.

The President Report, by Aviva Goldberg, reported enthusiastically that the Pediatric CST Group has over 100 multidisciplinary members on the active list. A financial report for 2014-2015 was provided by Lorraine Hamiwka. A highlight of activities by the CST Peds Group included the newly developed Pediatric Presse/CST Peds Group Newsletter. Other ongoing CST Peds Group activities discussed were a mentorship program that is anticipated to be in place by CST 2016, ongoing collaborations with the CNTRP and a Canadian Solid Organ Transplant immunization consensus clinical protocol initiative being led by Valerie Langlois.

At the Pediatric Group CST 2016 Meeting in Quebec City, we will be planning for a Pediatric Transplant Clinical Symposium. We are proud to announce that Dr. Kathryn Tinckam will be the guest speaker.