

## THE CANADIAN CHILDREN INFLAMMATORY BOWEL DISEASE NETWORK A JOINT PARTNERSHIP OF CIHR AND THE CH.I.L.D. FOUNDATION



**In Tribute:** Grace Mary McCarthy O.C., O.B.C., L.L.D., D. TECH., F.R.A.I.C. (Honorary)

On May 24, 2017, the Canadian Children Inflammatory Bowel Disease (IBD) Network lost its greatest friend and champion, Mrs. Grace McCarthy, who passed away peacefully after a lengthy battle with cancer. Best known for her groundbreaking political career, “Amazing” Grace was a member of the British Columbia legislature for more than 22 years, as well as a cabinet minister and Deputy Premier. A trailblazer in all areas of her life, Grace was the first woman in Canada to serve as Deputy Premier, as well as the first female president of a Canadian Chamber of Commerce. Throughout her life, Grace’s great pride in British Columbia was always evident, as was her desire to help women and children, successfully lobbying governments to allow women to own property, and initiating Canada’s first toll-free Help-line for abused children.

After retiring from politics, Grace became a noted philanthropist, raising funds for a number of worthy causes, but her fundraising became personal when her beloved granddaughter Shannon was diagnosed with IBD. Focused on defeating IBD like she had her political opponents, Grace co-founded the CH.I.L.D. Foundation, which since its creation in 1995, has raised more than \$30 million for research aimed at helping children with IBD and liver disorders. Her efforts transformed IBD research and care in British Columbia, upgrading the IBD procedural suite at BC Children’s Hospital as well as funding the construction of the first lab in the province to study pediatric IBD. Grace also established two endowed research chairs at the University of British Columbia and BC Children’s Hospital. As the first researcher recruited through her fundraising efforts, I met frequently with Grace, and recall being both impressed (and a little intimidated) by her larger than life personality, and strength of will. Like so many others, I am still inspired by her passion and commitment to helping children with IBD. In fact, hundreds of patients and families across BC owe their thanks to the tireless work of Mrs. McCarthy. Moreover as a direct result of her efforts, and through CH.I.L.D. Foundation support, there are now more than 25 researchers in 3 labs at BC Children’s Hospital Research Institute studying the causes and testing novel therapies for IBD.

Always a forward thinker with bold vision, Grace expanded her vision beyond the boundaries of British Columbia, seeking to create a network of clinicians and researchers from across Canada to work together to help children with IBD. Raising the necessary funds, and partnering with CIHR, Grace saw her vision brought to life in 2013 with the establishment of the Canadian Children IBD Network. Four years on, the network has been an outstanding success, establishing a unique inception cohort of children with IBD, as well as linking all the major Pediatric Inflammatory Bowel Disease centres in Canada towards a combined research effort. As we move forward, the physicians and researchers in BC and across Canada are heartened to know that every child who is helped through our network brings us one step closer to Grace’s goal of a world where children no longer suffer from IBD.



*Bruce Vallance*

*CH.I.L.D. Foundation Chair in Pediatric Gastroenterology*

*Investigator, BC Children’s Hospital*

*Professor, Division of Gastroenterology, Department of Pediatrics, University of British Columbia*

## ***A Message from the Network Management Committee***

*Dr. Anne Griffiths, Chair; Drs. David Mack and Kevan Jacobson, Co-Chairs*

What an inspiration Mrs. Grace McCarthy has been for all of us who work with children and families affected by IBD! Network investigators met together on June 2nd and 3rd, indeed saddened to have lost such a remarkable visionary with a life extraordinarily well-lived, but also more than ever committed to realizing the goals, which Grace had in mind in establishing the Canadian Children IBD Network.

**Moving Forward,  
Maintaining Momentum!**

Day One of the meeting was devoted to reviewing the Network's progress. More than 1100 children and adolescents with new onset Crohn's disease or ulcerative colitis have been enrolled in the inception cohort study across the 12 Network sites, and continue to have the features of their IBD, its treatments, and their outcomes rigorously recorded using the Network's data management platform. Led and encouraged by the Network leadership, individual investigators have stepped up to develop novel questions that can be addressed using the data generated and bio-specimens collected collaboratively across the Network. The theme of Day Two was "Moving forward, maintaining momentum", as the Network made plans for focused biomedical research, building on existing strengths, and in keeping with what patients and families have identified as the Number One unanswered question relevant to pediatric IBD: "What are the causes of Crohn's disease and ulcerative colitis?"

Treatment goals in pediatric IBD have changed significantly and for the better, since the CH.I.L.D. Foundation was first created in 1995. Rather than simply controlling symptoms while facilitating growth and well-being, the advent of more effective therapies has allowed us to target healing of the inflamed intestine, aiming to avoid long-term complications associated with IBD. As Network investigators, we are well aware of the many challenges faced in trying to meet this goal wisely for each patient, knowing that the clinical course of IBD is so highly variable. Nevertheless, in other pediatric medical fields, most notably hematology/oncology, it has become possible to "personalize" therapy, to optimize efficacy and safety of chosen therapies, by defining the biology carefully in each child. It is to this that we aspire in the management of pediatric Crohn's disease and ulcerative colitis. We move forward with new initiatives and national pediatric collaborations, which would not have been possible without the CH.I.L.D. Foundation.



## Patient Engagement in Research

Patients, clinicians, and families came together for a productive and collaborative day at SickKids Research Institute, Toronto in March where consensus was reached on the Top 10 unanswered Research Questions in pediatric IBD!

The journey to reach this final priority setting meeting began two years ago. Over the past two years, patients, families, and clinicians from the Canadian Children IBD Network sites were actively involved in this research. Patient and family involvement was key in this process, with half the steering Committee made up of current pediatric patients and their parents and former pediatric (now young adult) IBD patients. Over 400 other people contributed by submitting their unanswered research questions, and voting on their top 30 questions through national surveys.



At the final one day meeting in March, a representative group of individuals voiced their opinions, and came together in several small and large-group sessions to agree on the top 10 unanswered research questions in pediatric IBD. Attendees, who all had a personal connection to pediatric IBD, worked with experienced facilitators to reach consensus on the top 10 unanswered research questions in pediatric IBD.

In the month of May, the research team led a Twitter firestorm, and released these selected questions to the public #IBDTop10. Twitter has just been the start of how we plan to share these results—with the release of the top 3 questions, our work made 2302 twitter impressions (showing how many twitter users viewed our tweet), and 78 engagements (includes retweets, likes, clicks, expands, and replies). It was retweeted by several pediatric hospitals in Canada. These results indicate which areas patients and parents feel need more research, and therefore where research funds should be allocated.

Please share this work with your patients, and clinical staff by posting the Top 10 list of unanswered research questions in pediatric IBD.

Twitter: <https://twitter.com/mirapeds>

For more information: <http://mirapeds.ca/giresearch/ibdtop10>

## IBD Top 10

1. What are the causes of IBD (Crohn's disease, ulcerative colitis)?
2. Can IBD be prevented?
3. What role does diet have in the management of IBD?
4. What triggers flare ups in IBD?
5. How can we better define the role of, and improve access to, newer non-invasive, less costly, biomarkers of IBD endoscopic activity?
6. How can we increase the knowledge and/or awareness around pediatric IBD so that diagnosis is not delayed?
7. What are the long term effects of medications used to treat IBD?
8. How does an early diagnosis of IBD in childhood/teenagers impact the lifelong course (prognosis) of the disease?
9. What is the impact of access to psychological/mental health support in the management of pediatric IBD?
10. What is the optimal approach to diagnosis (education, psychological support, diagnostic tests) in pediatric patients with IBD?

## EXPLORING THE ROLE OF DIET and NUTRITIONAL TREATMENT in CROHN'S DISEASE

Crohn's disease is thought to result from abnormal immune responses to intestinal micro-organisms (microbiota) in genetically susceptible individuals, leading to chronic intestinal inflammation. There is currently great interest in understanding the role that diet might play in influencing the composition of the microbiota and thereby contributing to the inflammation. Nutritional therapy, specifically exclusive enteral nutrition (EEN), meaning drinking (or administering via a feeding tube) a nutritionally-complete liquid formula but avoiding all other oral intake, can be used to treat Crohn's inflammation. European pediatric treatment guidelines recommend EEN as first line therapy for children, who have just been diagnosed to have Crohn's disease. In the ongoing pan-Canadian inception cohort study roughly equal percentages of children are treated with EEN and with corticosteroids at the time of first presentation.



Dr. Johan van Limbergen, a clinician-scientist at the Izaak Walton Killam Hospital, Dalhousie University, Halifax, where EEN is very commonly used as first-line treatment, is exploring the impact of EEN on the microbiota, as assessed in stool. His research team has recently shown that microbiome composition, community structure and metabolites assessed before the start of treatment, influence the response to EEN. Importantly, their pilot data suggest that specific microbiome metabolites are associated with sustained remission after dietary therapy (Dunn KA.....Van Limbergen J *Inflamm Bowel Dis* 2016; 22: 2853-2862).

One of the problems with EEN, which cannot be continued long-term, has been the tendency for the inflammation and its symptoms to recur once regular food is resumed. Identifying suitable subgroups of patients, who might derive longer term benefit from this initial EEN treatment would constitute a major leap forward towards personalized IBD care. Dr. Van Limbergen plans to extend these studies using pre-treatment stool specimens collected from other sites in the Network.

Formulated food is not covered by drug insurance plans. Dr. van Limbergen has also been instrumental in persuading Nestle to provide its formulated food free of charge for patients at Network sites, who wish to use this form of EEN treatment, and are participating in research to understand how it works. For some sites, which previously had no access to means of funding, this will make drinking the formula a feasible option for treatment.

## OTHER NETWORK NEWS

### Now published.....

Benchimol EI, Bernstein CN, Bitton A, Carroll MW, Otley AR, Nguyen GC, Singh H, Vutcovici M, El Matary W, Mojaverian N, Tanyingoh D, Cui Y, Nugent Z, Coulombe J, Targownik L, Jones J, Leddin D, Rezaie A, deBruyn J, Griffiths AM, Mack DR, Jacobson K, Kaplan GG. Trends in epidemiology of pediatric inflammatory bowel disease in Canada: Distributed network analysis of multiple population-based provincial health administrative databases. *Am J Gastroenterol* 2017 Apr 18 (epub ahead of print). PMID: 28417994.

### Accepted for oral presentation by Network investigators at 4TH INTERNATIONAL PEDIATRIC IBD SYMPOSIUM, BARCELONA, SPAIN, SEPTEMBER 2017

Otley A, Griffiths A, Hood A, Laupacis A, Crane M, Murray K, Trempe M, Maghera M, Mann M, Kluthe C, Mansi M, Grant A. Patient engagement in research: using the James Lind Alliance process to identify the top 10 unanswered questions in pediatric IBD.

Carman N, Crowley E, Mack D, Huynh H, Wine E, El-Matary W, Ricciuto A, Arpino V, Church P, Walters TD, Griffiths AM. Efficacy of Vedolizumab in Anti-TNF refractory Paediatric Ulcerative Colitis: Data from the Canadian Children Inflammatory bowel disease Network.

