

Chair Report – January 2013



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The POGO Chair in Childhood Cancer Control at the University of Toronto is unique by virtue of its link to the position of Medical Director of the Pediatric Oncology Group of Ontario (POGO). This convergence enables creation of cross-institutional academic endeavours, both research and educational. Since POGO is the official advisor to the Ministry of Health and Long-Term Care with respect to childhood cancer, it also enables rapid translation of evidence derived from research findings into policy and implementation at a clinical level — thus fulfilling the mandate of improving childhood cancer control. The academic goals of the Chair and of its incumbent are primarily focused on dimensions of research and knowledge translation/education that reach across disciplinary boundaries, and on creating an interdisciplinary environment, actual and virtual, in which such scholarly activities can thrive. These goals place particular emphasis on the resource provided by the unique population database established by the POGO collaboration, and its potential for linkage studies consistent with the role of a designated entity under the Protection of Health Information Protection Act (PHIPA, 2004).

The last year has seen considerable further development of the research infrastructure, with expansion and enhancement of the population database. Scientific strength has been enhanced and personnel added. Research activities across an interdisciplinary spectrum have been productive and led to professional advancement for trainees and new grant money. Highly acclaimed interdisciplinary knowledge transfer and educational events have been created, and significant numbers of presentations and publications have occurred.

Highlights of activity over the last year include:

Personnel Enhancement

The recruitment of personnel to facilitate both in-house and collaborative database research was identified early as an important priority. The following personnel comprise the scientific complement of the POGO Research Unit:

- Scientist
- Associate Scientist
- Health Care Analyst



Thus, a well functioning nucleus of infrastructure uniquely placed to execute population-based collaborative research has been maintained over the last five years.

Research Collaborations

- Central America/AHOPCA: POGO has been actively involved in developing research capability in Central America through an international collaboration between POGO, St. Jude Children's Research Hospital, the University of Monza, Italy, and the AHOPCA collaboration encompassing seven Central American countries. This has led to considerable development of research capacity within these countries, and collaborations on issues of access, survival, and determinants of care. Additionally, the devolved care model, created by the previous Chair and POGO, has been adapted and adopted in several of the countries.
- Cancer in Young People in Canada (CYP-C): The past Chair continues to guide the national surveillance program of the Public Health Agency of Canada as a member of its steering committee, as a principal participant in the creation of its database, and with the analysis of the ensuing data.
- British Columbia: The synergy between the activities in academic pediatric hematology/oncology in Ontario and British Columbia has continued to be developed. The model of survivor care initiated in Ontario has been implemented in B.C. and deployment of the POGONIS database has created the opportunity for collaborative research and validation of outcomes.
- Canadian Cancer Society – Ontario Division (Pediatric Cancer Outcomes Initiative): Currently in its third year, this partnership has led to the near completion of three project domains.
 1. Data backfill of POGONIS and a consequent richer and more comprehensive resource for research and policy-relevant studies.
 2. Three sub-grants supporting investigator-initiated projects exploring: a) need and use of health care services in survivors of Hodgkin's Lymphoma; b) secondary prevention among childhood cancer survivors – a quantitative approach to facilitate effective use of screening; and c) relationships between pre-morbid developmental vulnerability and risk for adverse neurodevelopmental outcome after treatment for acute lymphoblastic leukemia.
 3. Evaluation of the incidence, outcomes and determinants of cancer in adolescents and young adults (AYA).

Research Partnerships

Institute of Cancer Research of the Canadian Institutes of Health Research (ICR-CIHR): Childhood Cancer Late Effects of Treatment

This five-year initiative supports four national projects that explore aspects of the role of emerging genome technology platforms in identifying and modifying the genetic risk of children with cancer to treatment-induced late effects. POGO is one of several national, provincial and institutional partners to facilitate the successful completion of all four projects and to enhance synergies between them.

Genome Canada: Medulloblastoma Applied Genomics International Consortium

This three-year project uses emerging genome technology platforms to characterize the molecular basis of medulloblastoma – the most common childhood brain tumor – for improved risk stratification, better treatment decision-making, and improved understanding of the values attributed by parents and



caregivers to the choice between survival and long-term toxicity of treatment. POGO is one of several national, provincial and institutional partners to facilitate the successful completion of this study. To date (18 months into the project), four high-impact scientific papers have been published from this work.

Creation of Research Funding and Execution Opportunities

Fellowship Program: There have been four Fellows over the last year:

- Nicole Law, PhD(c) – Is completing her PhD thesis entitled: Cognition, behavior, and affect in children with brain tumors: the role of regional white matter integrity and genetic markers in predicting functional outcome
- Furqan Shaikh, MD, MSc – Completed his MSc thesis entitled: Determining predictors of traumatic lumbar punctures in children with acute lymphoblastic leukemia, and the feasibility of ultrasound-guidance as an intervention to reduce their occurrence
- Lindsay Jibb PhD(c) – Has initiated her PhD thesis entitled: Development and preliminary testing of a clinical decision support system to aid adolescents with cancer in pain management.
- Nataliya Zhukova, MD, MSc – initiated her project entitled: Clinical and biological predictors of long-term outcomes in paediatric low grade glioma.

Seed Grants: A seed grant competition was offered again in the past year. Four grants were made:

- Comparison of Whole Body Diffusion Weighted Imaging to PET/CT at Baseline and Followup in Children and Adolescents with Lymphoma: A Pilot Study – E. Miller
- Understanding Body Image, Dating Relationships and Sexuality in Adolescents with Cancer – J. Stinson
- Development of a Pediatric Cancer-Specific Symptom Assessment Screening Tool – L. Sung
- The Impact of Pediatric Oncologists's Grief on Oncologist Well Being: A Qualitative, Multi-Site Study – L. Granek

Open Operating Grant

- A new Open Operating Grant competition was announced and three applications were received. Peer-review is underway and it is anticipated that one grant will be awarded for fiscal 2013-2014.

International Development and Consultation

One jurisdiction continues to benefit over the last year from consultation and development assistance from POGO and the Chair:

- AHOPCA (Asociacion de Hematologia-Oncologia Pediatrica Centroamericana) – Has developed a research partnership with POGO, but most recently sent a delegation representing all seven constituent countries to further develop both research collaboration and public policy development. In particular, in an attempt to reduce one of the most preventable of contributions to early mortality, abandonment of therapy, AHOPCA has adopted and adapted the model of devolved care developed by POGO.



Looking Ahead

With increasing precision and a widening array of tools, POGO will be in a position to identify, target, and study outcomes of childhood cancer at the clinical, functional, and systems levels and translate those studies into policy and practice, bringing increased evidence to the development of cancer control. The ongoing commitment of the Ministry of Health and Long-Term Care to the evidence-based and research backed advice of POGO and the ability to link that advice to the leaders of the pediatric and pediatric oncology programs of the Academic Health Science Centres and to community organizations will ensure continuing optimization of Ontario's childhood cancer system, and its export to other jurisdictions.

We have had great success in attracting substantial funds from the CIHR, and from the CCS to enable further optimization of the POGONIS resource, and to applied population-based research via database linkage and other epidemiologic methodologies. We expect to complete a wide range of ongoing studies, to continue to launch both in-house and collaborative studies with external associate researchers focused on the priorities already identified, and to bring to fruition the studies of system efficacy and utility. We will also develop new studies of determinants of outcomes for adolescents and young adults (AYA) in collaboration with our adult colleagues, with the anticipation of improving outcomes for this neglected group of cancer patients. In addition, we will develop new models of support for non-MD clinician scientists to enhance career development opportunities and dedicated protected time to pursue research endeavours.