Year in Review: Hotel Dieu Hospital Research Institute

2014/15

Research Excellence in Ambulatory Care and Health Care Systems
The Hotel Dieu Hospital Research Institute (RI) has enjoyed another exciting and productive year in 2014-15. The RI welcomed the opportunity to support novice and experienced researchers in their endeavors, and to work with new partners in multidisciplinary collaborations. In particular, clinical trial research in emerging areas such as Mental Health gained momentum, existing research areas flourished and potential research in areas such as the health needs of Canadian military families began to develop.

Six Enabling Directions categorize the RI’s activities of 2014-15 for the two Strategic Priorities of the RI, outlined in its Strategic Plan for 2015-19:

Strategic Priorities:

- To improve and transform care delivery by focusing on health systems-level research in ambulatory care and the role of HDH in maximizing health care outcomes at each level
- To build on existing strengths and support emerging research potential in ambulatory care

**Enabling Direction 1: Raising our profile**

**CAHO metrics and stories:** Working together with the HDH Finance Department, Kingston General Hospital (KGH), Providence Care (PC) and Queen’s, the RI submitted the research funding metrics required for CAHO by the deadline of October 24, 2014. The RI also submitted a story based on research at the Human Mobility Research Lab that meets CAHO’s now more strictly defined story requirements. Further, the RI contributed on behalf of HDH to CAHO’s annual report.

**Population of Research Institute website:** The internal and external sites for the HDH RI continue to be updated with RI news, information about HDH research, relevant documents and links for potential researchers. The external page can be accessed at [http://www.hoteldieu.com/research.html](http://www.hoteldieu.com/research.html).

**Support of HDH as a Best Practice Spotlight Organization (BPSO):** The RI continued to provide guidance on publication of BPSO projects, including assistance with HSREB application. The Research Institute helped with analysis and presentation of data on a falls prevention BPSO initiative led by Karen Bright and Marie Pitcher, as well as editing and submission of a manuscript on a diabetic foot assessment BPSO initiative led by Nancy Benn and Jennifer O’Neil.

**Research Symposium:** On April 8, 2014, the Research Institute hosted its inaugural Research Symposium, entitled: *Seeing & Reaching: How simple behavioural tasks teach us about the brain in health and disease.* Our panel of presenters consisted of Dr. Stephen Scott, Dr. James Reynolds and Dr. Doug Munoz. The event was held at the Central branch of the Kingston Frontenac Public Library. Several members of the public attended, engaged in discussion and participated in demonstrations of eye tracker equipment by graduate students. A second public Research Symposium is planned for June 2015 involving Dr. Kevin Deluzio, Dr. Michael Rainbow, and Dr. Daniel Borschneck, showcasing the work of the Human Mobility Research Lab.
Neurosciences Clinical Research Lab: The RI was pleased to participate in the official opening of the Queen's Centre for Neuroscience Studies Clinical Research Lab, where translational research into the range of neurological disorders occurs in close proximity to clinical treatment.

Enabling Direction 2: Building capacity by increasing external funding – including industry

New clinical trials/industry partnerships:

We have had major success in this area. For example, in 2014-15, a research collaboration between Dr. Sarosh Khalid-Khan, Dr. Reddy Pappu and Dr. Nasreen Roberts in Child & Adolescent Mental Health, and TELUS Health involving an award of $488,749.00 was initiated and is now in the final stages of contract preparation. For the needs of this project, the RI involved the Chief Information Officer, the Privacy Officer, Public Relations, Human Resources, and Finance in proposal and contract development. The RI also continues to assist Dr. Sarosh Khalid-Khan in setting up the necessary infrastructure for ongoing clinical trials in Mental Health, including a new clinical trial on an adjunctive treatment for youth with schizophrenia.

Further, in the past fiscal year, the RI navigated the approvals needed for the Diabetes Education & Management Centre to participate as a sub-site in the Ottawa Model for Smoking Cessation study led by the University of Ottawa Heart Institute.

The RI also supported a pilot study in breast tumour resection led by Dr. Jay Engel.

Currently, the RI is supporting Dr. Moran-Mendoza in the Department of Respirology in contract negotiations and setup for participation in a multicentre, observational study evaluating outcomes in patients with idiopathic pulmonary fibrosis.

Clinical trial oversight: The RI also participated in meetings with Clinical Trials Ontario and Queen's, PC and KGH related to the new Clinical Trials Ontario’s streamlined ethics review system to be implemented in 2015. HDH is committed to participate in this exciting venture that will streamline the ethics approval process for multicentre clinical trials.

Grant applications: The RI also worked with partners at HDH and Bone & Joint Canada to submit an ARTIC (Adopting Research to Improve Care) Letter of Intent to CAHO (Council of Academic Hospitals of Ontario) and HQO (Health Quality Ontario). Although the project was not selected to proceed to the full proposal stage, valuable partnerships were formed and further granting opportunities will be sought.

Funding applications: The RI worked with University Hospitals Kingston Foundation (UHKF) to open up possibilities for funding support for projects, which did not easily meet the requirements of granting agencies. Most recently, application opportunities to foundations identified by UHKF may help fund a study on the unique challenges of Canadian military families with special needs children. This study has already obtained Queen’s SARC (Senate Advisory Research Committee) seed funding and is being led by Dr. Garth Smith, HDH Developmental Pediatrician, and Dr. Heidi Cramm (Queen’s - Rehabilitation Therapy & CIMVHR - Canadian Institute for Military & Veteran Health Research).
Philanthropic research priority for UHKF: Vic Sahai has been working with UHKF to establish a philanthropic research priority, as a means of securing more funding for research initiatives at HDH.

Enabling Direction 3: Developing partnerships to enable collaborative research

Collaborations with other academic partners: The RI facilitated a student research project in the St. Lawrence College (SLC)/Laurentian University BSc in Nursing program, which was a study of wait time perceptions at the Urgent Care Centre. The RI looks forward to ongoing collaborations with SLC.

Another student research project, initiated by the RI together with the Child Development Centre (CDC), allowed the CDC to identify the perceptions of families and community partners (both public and non-profit organizations) of CDC. Thirteen out of 26 community partners participated. A Queen’s MBA student carried out the project. The findings will help define the CDC’s purpose and direction for the upcoming years.

The RI also collaborated in writing a paper on the epidemiology of arthritis ("Quantifying the Arthritis Pyramid for Ontario by Using Comprehensive Community Health Data") with Dr. Tanveer Towheed, a rheumatologist working at KGH and Queen’s, and is near submission to the Canadian Journal of Public Health.

Networking opportunities: Vic Sahai attended a workshop entitled Applying Behaviour Change to IPAC Best Practice on October 19-20, 2014 in Toronto, which was a collaboration between Public Health Ontario, the HDH RI and Queen’s. This workshop resulted in the development of key research priorities to guide project development and funding applications, and potential interventions in infection control, particularly hand hygiene adherence, in health care settings.

Further, the Montfort Hospital Research Institute in Ottawa welcomed the RI at a site visit in October 2014, where they discussed mutual challenges and collaboration opportunities.

Support for Hospital Partners in Research: The RI welcomed the opportunity to meet with Dr. Kathleen Fitzpatrick, who was appointed Director of Administration at PC in August 2014, at HDH for an introduction to the HDH RI, and how it can help support the emerging RI at PC.

Learning and knowledge acquisition: Vic Sahai completed development of a series of online calculators together with Dr. Zulkernine, Canada Research Chair & Associate Professor, Queen's University School of Computing, and one of his students, as well as Dr. Linda Lévesque, Assistant Professor within the Faculty of Health Sciences. The purpose of these calculators is to allow learners to obtain statistical treatment-related indicators when assessing a research article. The online calculators are currently being pilot-tested by medical students. Eventually, these programs will be available on the Queen’s Faculty of Health Science website and linked from the RI website.

Canada-Africa Research Exchange Grant (CAREG) - Secure and Trustworthy Reservation and Medical Records System (STRMRS) ($45 000): This award funds collaboration between Dr. Zulkernine (Queen’s University School of Computing) and Dr. Ejigu (Addis Ababa University, Ethiopia). The project aims to
improve public healthcare service delivery through a web-based overlay to the existing Health Management Information System (HMIS) in Ethiopia. In 2014, the RI had the opportunity to connect Dr. Ejigu, who travelled to Kingston, with Karen Hanewich, Privacy Officer, for her knowledge and experience related to IT and its impact and utilization on patient care.

**Enabling Direction 4: Moving research into practice**

**Kingston Ophthalmic Training Centre (KOTC) Research:** The RI continued to provide support at all stages of research projects to KOTC students. Monthly research meetings were held with the current group of KOTC students and co-ordinator Craig Simms. The RI is now involved in manuscript preparation of the first two KOTC student projects, which were completed in the 2013-14 academic year. These investigated 1) differences in visual acuity as measured by three projectors in use at HDH, and 2) differences in axial length as measured by two common probes used at HDH prior to cataract surgery. Two more student research projects are near completion: 1) a comparison of central corneal thickness measurements performed with three different instruments, and 2) an investigation of the differences between optical coherence tomography (OCT) measurements of the cup-to-disc ratio (CDR), physician estimates of the CDR through a lens (ophthalmoscopy), and physician estimates of the CDR from photos of the fundus. All projects will be presented in a poster session at the Queen’s University Ophthalmology Research Day on June 3, 2015.

**Research Club:** Group meetings continued in 2014-15. Ongoing project topics are: defining predictors of diabetic remission after gastric reduction surgery in bariatric patients; effect of animation on spirometry effort and volume; attitudes and perceived barriers to hand hygiene in ambulatory health care; attitudes, knowledge, and self-reported behaviour regarding hand hygiene among medical students and residents. Data from the latter project was published in December 2014 as a Letter to the Editor entitled *Hand Hygiene and Health Care Hierarchy: A Resident’s Perspective*, in the online journal *Education for Health*, and another paper from the data has also been submitted to *Education for Health*.

**Wait-one time project:** Preliminary data reported in 2011 identified opportunities for improvement in the referral/consultation process between Queen's Family Health Team and the HDH/KGH Urology Department. The goal of this project is to reduce wait-one times through the creation of a value stream map of the referral continuum based on best practices. The RI has assembled a cross-disciplinary team including a quality improvement consultant, urology specialists at HDH, primary care physicians and supporting research staff at Queen’s University and HDH. Solutions will focus on optimizing the process rather than introducing new technology or other outside resources.

**Enabling Direction 5: Transparency and openness through the engagement of researchers**

**RI Infrastructure development:** After consulting with HDH Finance, the RI has decided not to transfer indirect research funds to its bank account at the Bank of Montreal; however, funds for new research projects on which the RI is a signatory will be held in the new bank account. To date, six Board meetings and three Members’ meetings have been held. At the most recent Board meeting, the draft 2015-19 strategic plan for the HDH RI was finalized and approved.
Research staff focus group: The RI held two meetings in 2014 regarding the unique needs of HDH researchers. At the second meeting, Troy Jones, HDH/KGH Chief Information Officer, addressed the group as guest speaker. Troy offered important information for those seeking to do research with additional IT requirements and privacy concerns, and also answered questions from the group. Follow-up to concerns from the first focus group meeting was provided, and new issues were also addressed.

Hospital research inventory and activity requests: The RI responded to a number of requests regarding research that occurs at HDH, as the hospital faces increasing financial constraints and seeks to ensure reimbursement for research activities.

Enabling Direction 6: Supportive infrastructure that enhances research and knowledge translation

Support of existing clinical trials: The Research Institute continues to support established clinical trial research and actively works to help researchers overcome barriers, some of which have been present for a number of years, and others which arise unexpectedly. This often involves prompt action or setup of meetings with other stakeholders, in order to communicate the needs of clinical trial researchers particularly in relation to sponsor requirements.

Contract review: The RI continues to review research contracts for potential financial implications to HDH, and to ensure that researchers have set up a reimbursement process before institutional signatures. In 2014-15, this has involved a number of new agreements involving data transfer to central databases such as ICES, OBI or INQUIRE, which have required the input of stakeholders such as the HDH/KGH Privacy Officer and the HDH/KGH Chief Information Officer.

Funds set-up and hiring of research staff: In 2014-15, the RI has set up research funds at HDH, including the Nestle Canada funds ($29 000) for the bariatric research project, which emerged from the Research Club mentioned below, and InterMune Canada funds ($74 880) for research in idiopathic pulmonary fibrosis. These awards have also involved working with Human Resources to hire research staff for these projects.

Existing and new staff orientation to HDH RI: As of September 2014, the RI has presented a brief overview of the RI and its services to new staff members at every monthly General Orientation session. The RI also meets on request with any HDH researcher who requires support with a research idea or existing project. Additionally, the RI has become involved in supporting new research in the Breast Assessment group.

Literature Reviews: The RI has been pleased to receive an increasing number of requests for literature searches during research proposal development. Often these searches are used to focus research questions before funding applications are made.

Research Hospital Appointment applications: The RI continues to assist researchers who are not HDH employees, and wish to conduct research projects at HDH (or both HDH and KGH), in obtaining the necessary credentials approval through the Research Hospital Appointment application process. This
involves individuals such as staff and students from Queen's or SLC. The RI ensures the integrity of the appointment through approvals from supervisors, department heads and the HDH Director of Research, as well as through proof of Queen's University Health Sciences Research Ethics Board (HSREB) approval for the project before the appointment is granted.

Revision of policies and processes related to research: Discussions with stakeholders from Human Resources, Education & Organizational Development, Patient Care and Professional Practice were held with the goal of revising existing staffing, credentialing and orientation policies to reflect the unique needs of HDH. In particular, the need for researchers who are new to HDH to complete Orientation requirements has been recognized. Changes have been drafted, and the necessary approvals will be sought for any suggested revisions. The RI was also consulted on workflow processes for registration of research patients, with a view towards tracking of research populations and appropriate financial compensation for research-related visits.

TRAQ application approvals: The TRAQ (Tools for Research at Queen's) system provides a means for proposed research projects to be evaluated prior to approval, by hospital operational directors and the Director of Research (Vic Sahai), for financial and operational feasibility within hospital resources. To date this has involved 105 applications. The Research Institute has isolated a number of opportunities for the TRAQ software to better serve its users, and also for users to communicate better within and outside of the capabilities of TRAQ. The RI initiated and set up meetings with Queen's TRAQ staff, Queen's and HDH IT personnel, and other researchers, which have enabled more efficient use of the system. As the need arises, the RI continues to work with TRAQ and other staff to streamline the approval process.

TRAQ and HSREB application submissions: The RI continued to complete TRAQ and HSREB applications on behalf of HDH researchers as needed.

New Venture: The RI participated in discussions led by Ernst & Young LLP for the creation of a new venture for health sciences research in Kingston, involving HDH, KGH, PC, and Queen's University.

The Research Institute is grateful for the supportive leadership at Hotel Dieu Hospital and looks forward to new and ongoing opportunities in achieving research excellence in ambulatory care and health care systems.