

Date:	February 20, 2016
Agenda Item:	University Waterloo & Grand River Hospital Research Agreement Year-One Review
Purpose:	Information
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YEAR-END REVIEW – ACHIEVEMENTS

On March 20, 2015, GRH announced its formalized research partnership with the University of Waterloo to enable academics and clinicians to collaborate on research that will benefit patient care and enrich university research. Our joint participation in research will enrich the environments where we work, stimulate inquiring minds, and provide opportunity for our staff and physicians to continuously learn and share new knowledge.



The partnership has launched the establishment of a joint research agenda where by researchers at GRH and UW will focus initial efforts on areas of aging well and older adult care, innovation in healthcare delivery, and cancer care.

In an effort to link GRH staff and UW researchers who have similar research interests, a first in a series of 'Meet & Great' evenings was held on June 2, 2015, hosted at the University Club. This first session brought together researchers who have a common interest in work related to falls (risk assessment and prevention), pain management, rehabilitation, and wearable technology. Approximately 45 GRH and UW staff participated in the event.

The second of such events was held on June 23, 2015, hosted at the Mike & Ophelia Lazaridis Quantum-Nano Centre. This session brought together researchers with a common interest in secure transfer of data, visualization of data and wearable technology. Approximately 30 GRH and UW staff participated.

The third meet & greet was held on October 13, 2015, hosted at the School of Optometry. Twenty-five GRH and UW staff/researchers with interest in clinical assessment and diagnostics that enable early detection/identification of risk factors for poor health outcomes, pain management, infection prevention & control, and safer medication management came together.

JOINT RESEARCH STUDIES IN 2015

Since the inception of the formalized research partnership two studies proceed to receive administrative and ethics approvals.

Dr. John Hirdes is a Professor in the School of Public Health and Health Systems, University of Waterloo. He is a senior Canadian Fellow and a Board Member of interRAI, an international consortium of researchers from over 35 countries. He chairs interRAI's International Network of Excellence in Mental Health and the interRAI Network of Canada. He is also a Fellow of the Canadian Academy of Health Sciences. Dr. Tina Mah, Vice President Planning, Performance Management & Research and Claudette DeLenardo, Corporate Director Quality & Planning partnered with Dr. John Hirdes, Dr. Christopher Perlman, and Nancy Curtin Telegdi in the assessment of patients' self-assessed quality of life and experience with care. Funding support for the project and research assistant, Ela Stankiewicz, was provided by interRAI Canada. Over the summer months a pilot of two interRAI Quality of Life assessment surveys were introduced within adult mental health and complex continuing care. interRAI is an international collaborative to improve the quality of life for vulnerable persons through a seamless comprehensive assessment system. The consortium strives to promote evidenced-informed clinical practice and policy decision making through the collection and interpretation of high-quality data about the characteristics and outcomes of persons served across a variety of health and social services settings.

Dr. Heather Keller is a Professor in the Department of Kinesiology, University of Waterloo and a Schlegel Research Chair in Nutrition & Aging. Dr. Keller has published extensively in the area of nutrition and older adults. Her current research is focused on eating in dementia, social aspects of eating, weight loss, nutrition risk programs and interventions. She is chair of the Canadian Malnutrition Task Force. In 2007 she received the Betty Havens Knowledge Translation Award from the Institute of Aging, Canadian Institutes of Health Research. Dr. Keller initiated a research partnership with the leaders in the GRH Clinical Nutrition Services, Ms. H. Marcus and Ms. L. Halford on the assessment of patient malnutrition risk in acute care settings and testing of 'best practice' tools to support the identification of barriers to food intake and poor food intake in hospital patients in 2011/14/15. Dr. Keller subsequently in 2015, submitted another research proposal in collaboration with Ms. Marcus examining the reliability testing of a survey of knowledge, attitudes and perceived practice of hospital staff for the detection, prevention and treatment of malnutrition.

NEW FOR 2016

A third study has recently been presented to the research committee and received administrative approval. Dr. Paul Stolee is an Associate Professor in the School of Public Health and Health Systems. Dr. Stolee's research focuses on strategies to improve the quality of life of older persons, and to improve the effectiveness of geriatric health services. Dr. Josephine McMurray is an Assistant Professor Business

Technology Management/Health Studies with Wilfred Laurier University who's general research interests include healthcare system integration, quality and patient experience improvement, and system performance measurement. In this new study, Dr. Stolee has partnered with Heather McNeil, PhD student and Research Associate with the Geriatric Health Systems Research Group, Josephine McMurray, and Andrea Guth, Program Director Waterloo Wellington Integrated Stroke Program to conduct a pilot study to measure patient experience within the rehabilitative are outpatient/ambulatory setting.

A fourth study received THREB ethics approval to begin in 2016, Dr. Jonathan Blay, Professor with the School of Pharmacy, focuses his research on understanding the tumour microenvironment of solid cancers. Dr. Blay has teamed up with Dr. Mala Bahl, Medical Oncology Physician, in a study to identifying potential metastatic behaviours in circulating tumor cells from the peripheral blood of colorectal and breast cancer patients.

OTHER INITIATIVES

Collaboratively with the University of Waterloo, McMaster University, and Conestoga College, GRH has been actively engaged in the development and roll-out of the Emergency Department Assessment Urgency Algorithm. Spearheaded by Drs. George Heckman, Andrew Costa, and Tina Mah, the emergency department at GRH has implemented the assessment tool as a means of identifying the level of risk of fragility in older adults. The tool captures the functional and social factor of older adults and stratifies patients into six levels of need.

GRH Medical Physicists Drs. Ernst Osie, Johnson Darko and Mr. Andre Fleck are working with Dr. Shawn Wettig of UW and Dr Tony Mutsaiers from the Ontario Veterinary College on "Gold Nanoparticle Multimodality Prostate Cancer Diagnostic and Therapeutic Enhancement" research. The TELUS Ride for Dad foundation has committed \$104,000 to help the team of collaborators fine-tune a treatment that utilizes irradiated gold nanoparticles to target prostate cancer. The goal is to shorten treatment duration and reduce side effects, by delivering a more targeted treatment at a lower dose.

ACTIVITIES OF THE RESEARCH OFFICE

As a part of the memorandum of understanding, dedicated research office space was arranged for both the KW and Freeport campuses. Researchers and staff/physicians from UW and GRH now have access to private and secure work stations with double-lock storage in the "University of Waterloo Research Center". Located on the 9th floor of the KW main hospital and second floor of Village Center at the Freeport campus, the private space offers work stations for six and four, respectively. The space is equipment with internet access, telephones, individual work stations, meeting table, and storage lockers.

Following the meeting & greet sessions, a number of inquiries were made to the research office for the facilitation of connections. Researchers at UW provided the research office administrator with a brief description of the type of work they were interested in; this in turn was used to source a physician/staff member with a similar interest. In total, 14 inquiries were made into the research office and 12 were

successful matched. It is hoped that these new acquaintances lead to fruitful research partnerships. The following linkages were made between faculties and hospital programs:

University of Waterloo	Grand River Hospital
Applied Mathematics	Infection Control
Mechanical and Mechatronics Engineering	Laboratory (2)
Center for Bioengineering and Biotechnology	Health Information Management Administration Rehabilitation/Physiotherapy (2) Medical Imaging
Electrical and Computer Engineering	Rehabilitation
Network for Aging Research	Administration
WATCACE – Center for the Advancement of Co-operative Education	Organizational Development
Psychology	Mental Health

The research office has been actively engaged with the Center for Bioengineering and Biotechnology (CBB) to facilitate the development of a working group related to falls & falls prevention. The group, comprised of five researchers from UW and four clinicians from GRH, have been meeting to explore areas of opportunities related to wearable technology for the prevention of falls. The CBB has also actively engaging the research office in the development of “Pizza with the Profs” sessions. These session coined as ‘first dates’ provide an opportunity for UW researchers and GRH staff who may have been unable to attend a meet & greet to establish relationships. The sessions are planned to entail a 30 minutes presentation by a UW researcher followed by an open question and answer period. The sessions would focus on informing clinical staff of research at UW that may be of interest to them. Further, the session are aimed as a means to engage between the two organizations so that research focuses on existing clinical needs. The first session, held February 10th at the Freeport Campus, saw over 40 GRH clinicians in attendance. The Pizza with the Profs session will run monthly on the second Wednesday of the month.

Also facilitated through the Research Office were three research grant application processes for Dr. John Michela’s proposal “Investigating Mental Health in the Workplace: Identifying and Implementing Interventions for Improved Mental Wellbeing”; Drs Hebert & Hirdes’ proposal “Systems Approach to Care of the Acutely Ill Frail Older Persons in Home Care, Nursing Home, Acute Hospital and Intensive Care Settings”; and Dr. Pearl Sullivan’s proposal “Creating Canada’s Ecosystem for a Dependable Internet of Things”. Additional coordination activities included data agreements facilitation and finance activities.

OTHER ACTIVITIES

During the past year, including the studies noted above, six studies remain actively ongoing with one additional pending ethics approval, five previously approved joint studies have come to completion.

On-Going Studies:

GRH Researcher	UW Researcher	Study Title
Hilda Pope	Dr. James Dankert	Examining the neural correlates of updating internal representations
Joan DeBruyn	Dr. Dana Kulic	Monitoring walking with wireless inertial measurement units during stroke rehabilitation
Hilda Pope	Dr. James Dankert	Neural Correlates of Boredom and mind wandering and their relation to aggression in traumatic brain injury
Dr. Robert Stevens	Dr. Paul Spaguolo	Examining the anti-leukemic properties of natural health products
Hannah Marcus	Dr. Heather Keller	Reliability testing of a survey of knowledge, attitudes and perceived practices of hospital staff for the detection, prevention and treatment of malnutrition
Dr. Tina Mah Claudette DeLenardo	Dr. John Hirdes	Pilot testing of the interRAI subjective quality of life survey in complex continuing care and mental health and addictions program
Andrea Guth	Dr. Paul Stolee	WatLX©: A measure of patient experience for the rehabilitative care outpatient/ambulatory setting

Concluded Studies:

GRH Researcher	UW Researcher	Study Title
Dr. Darindra Gopaul	Dr. H.J. Kwon	Application of displacement-gradient elastography to the diagnosis of breast cancer
Dr. Ron Fowlis	Dr. Laura Middleton	Targeting mild cognitive impairment with cardiac rehabilitation: an RCT of effectiveness
Dr. William Ciccotelli	Dr. Biao Wang	Development of a predictive model for nosocomially based transmission of c difficile
Nicole Rutherford	Dr. William McIlroy	Therapist perspectives on the determinants to participation in aerobic exercise during inpatient rehabilitation early after stroke
Hannah Marcus	Dr. Heather Keller	Nutrition care pathway for hospitalized older adults: content validation, feasibility and reliability testing

In September 2015, the University of Waterloo launched the GRH Partnership webpage (<https://uwaterloo.ca/research/university-waterloo-grand-river-hospital-research>) on the university's public website. The webpage highlights our joint organization partnership, the research agenda topics, who to contact to discuss collaborative projects, the available resources for UW researchers at GRH's campuses. In the five months since its development, the site has seen just over 200 pages views by 166 unique inquiries.

Also launched in 2015 was the coordinated ethics review process. The ethics committees at UWaterloo and the Tri-Hospital Research Ethics Board (THREB) have established an alternative review model for research involving investigators from GRH and UW. In the past, researchers were required to obtain independent ethics reviews from each organization. The joint review process allows for a single ethics

application form, one integrated set of review comments by the two committees, and one clearance certificate. This streamlined joint process allows for a single point of contact, eliminated the need for consecutive reviews at both institutions, and reduces the time needed to obtain etic clearance for multi-site research.